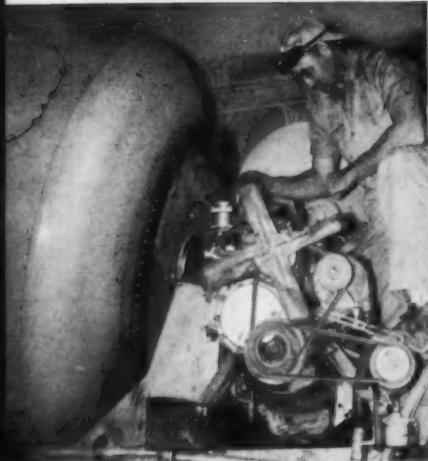


# CONCRETE



OUR 53RD YEAR  
Serving the Concrete Industries

JULY 1957



**auditorium • coliseum**

Municipal Auditorium and Coliseum, Charlotte, N. C.  
Archt. — A. G. O'Dell, Jr.  
& Associates,  
Charlotte, N. C.  
Struct. Engr. — Severud,  
Elstad, Krueger,  
New York, N. Y.  
Contr. — Thompson & Street Co.,  
Charlotte, N. C.  
Pozzolith ready-mixed concrete — Concrete Supply  
Co., Charlotte, N. C.  
Below — view of 2500-seat auditorium.  
Bottom Photo — section of 13,500-seat coliseum.

**Concrete of good appearance  
and other desired  
qualities with  
POZZOLITH**

In the construction of this outstanding municipal auditorium and coliseum — as with many other important projects built since 1932 — Pozzolith proved a valuable aid in improving cohesiveness and plasticity, to enhance the appearance of exposed concrete.

Beauty and utility with architectural concrete is but one of the advantages obtained with Pozzolith . . . key to the control of:

1. water content . . . makes possible lowest water content for a given workability.
2. entrained air . . . provides optimum air content without sacrificing other desired qualities.
3. rate of hardening . . . provides desired handling and finishing time under widely varying job conditions.

Any one of our more than 100 seasoned fieldmen will be glad to demonstrate the full benefits of Pozzolith for your project, and to advise of the availability of Pozzolith Ready Mixed Concrete through more than 1000 qualified producers.



**THE MASTER BUILDERS co.**

*Division of American-Marietta Company*

Cleveland 3, Ohio—Toronto 9, Ontario

Cable Address, Mastmethod, N. Y.

(Patent Pending)

# ROSS PORTA-PLANT



TRAVEL POSITION, the New ROSS PORTA-PLANT (Pat. Pending), shown above, is a new concept in portable concrete batching plant. Designed to produce 200 cubic yards of concrete per 8-hour day, and suitable for large jobs as well as small, the plant can be easily transported at normal road speeds by a half-ton pick-up truck.

## DESIGNED BY A READY-MIX OPERATOR... COMPLETELY ENGINEERED FOR READY-MIX PRODUCERS

Ideal for the large job, the ROSS PORTA-PLANT provides efficiency for the small producer. Engineered for feeding with any front-end loader and for sack cement, the ROSS PORTA-PLANT is easy and simple to operate for maximum performance. Easily moved along the highway, at normal truck speed, a one-half ton truck is sufficient for transporting. THE ROSS PORTA-PLANT is ready to operate within five minutes after arrival. It is sturdily built for many years of trouble free use.

### CONDENSED SPECIFICATIONS

POWER: 9 HP air-cooled gasoline engine with reduction gear. Mounted for easy starting or servicing.

CONVEYOR: Sealed, troughing and return carriers, 24" 4-ply belt with housing.

BIN: 5 cubic yard heavy gauge steel bin; locks for traveling.

SCALES: Cardinal 3-beam: 10,000 pound, 8,000 pound, and 3,000 pound with over and under indicator. Fully visible to operator.

HEIGHT: Extreme height at bin 7'-6".



OPERATING POSITION, the ROSS PORTA-PLANT is ready to work practically upon arrival at job site; removal of two bolts and moving out of the rear axle is all that is necessary.

CONTACT US FOR THE NAME OF THE DEALER NEAREST YOU

## ROSS PORTA-PLANT

Box 446

Phone 2697

Brownwood, Texas

CONCRETE—July, 1957

# DAREX

## Feature Product Extra



### WRDA—First 3-way water reducing agent— Available in liquid form



#### WRDA available in liquid form ready for use

Delivered in rustproof 54-gallon drums, in tank trucks or in tank cars, liquid WRDA ends the complications and expense of dry powder mixes. Pre-mixed in the factory, with solids content rigidly controlled, WRDA eliminates the guesswork of job proportional mixing . . . and greatly reduces material handling and warehousing problems. Bag breakage and moisture pick-up are eliminated, labor costs are cut. WRDA can be efficiently dispensed by means of automatic equipment.

Begun in Philadelphia, a new tank truck system for metered delivery of WRDA to ready-mix plants is scheduled for use throughout the country. With this unique metered tank truck service, ready-mix plants are supplied with regular deliveries just as a householder automatically receives heating oil delivered to his home.



**Permits 20% reduction in water content;  
increases compressive strength 30%;  
steps up cement hydration**

Hailed as the first triple-purpose Water Reducing Agent ever offered the construction industry, Dewey and Almy's field-approved "WRDA" has received enthusiastic endorsement from engineers and contractors throughout the United States.

This remarkable chemical admixture disperses cement particles within the mix and, through an exclusive catalytic agent, speeds up their reaction with water. Its benefits are threefold: 1—water content can be reduced as much as 20%, yet the mix remains fluid and easy to pour; 2—compressive strength is increased up to 30%; 3—the over-all quality of the concrete is greatly improved.

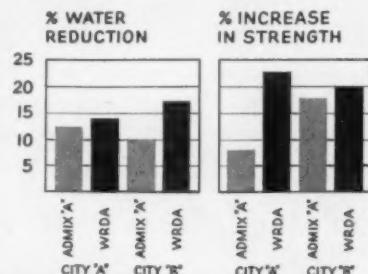
The catalyst in WRDA speeds up the reaction between portland cement and water for higher *early* strength. Coupled with this, the admixture's dispersing action exposes more cement particles to hydration. Combined result is a fine-grained concrete which hardens with a compressive strength up to *1,000 pounds per square inch* higher than untreated concrete.

Proven in rigorous tests by impartial laboratories and in actual full-scale field trials at ready-mix plants,

#### Increases Strengths in Structural Lightweight Concrete

Used with Lelite lightweight concrete, WRDA and DARALITE (Dewey and Almy's lightweight air entraining agent), achieved amazing results in a mix designed for the construction of a Massachusetts high school. Water-cement ratio was reduced 20% by the addition of these two materials. Unit weights dropped — yet strengths were actually *increased* an average of 32.9%.

WRDA meets or exceeds accepted industry standards. Charted below are actual job test comparisons of competitive admixtures and WRDA.



WRDA is the culmination of Dewey and Almy research, backed by more than 25 years' experience in cement mills with TDA, another D&A catalyzing-dispersing agent. WRDA is unique in that it does not contain calcium chloride—nor does it delay finishing time.

Ready-mix operators report important gains with the admixture: less tendency to "wet up" concrete, minimum strength variations, and—most important—the finished job meets the most demanding specifications.

#### Ideal Admixture with DAREX AEA

Added separately to the concrete mix, another D&A product, DAREX AEA, entrains millions of tiny air bubbles to minimize particle interference among the sand grains in the mix. This air-entraining action, combined with WRDA's dispersing effect on individual cement particles, permits water reductions even greater than 20%. The two admixtures team up to produce a remarkably effective catalyst-dispersing and air-entraining action.

## DEWEY AND ALMY DAREX Newscope

### Entrained Air Strengthens Concrete In Flood Control Pumping Station

Over 10,000 cubic yards of concrete—air-entrained with DAREX AEA—were poured into intricate forms for this \$1,222,000 pumping station at Lake Okeechobee, Florida. Vital part of a \$300,000,000 flood control and water conservation project by U. S. Army Corps of Engineers, this station contains a solid mass of concrete 42 feet thick, except in steel intake flume and diffuser sections. DAREX AEA helped in placing mix, increases strength of pump impeller housing.

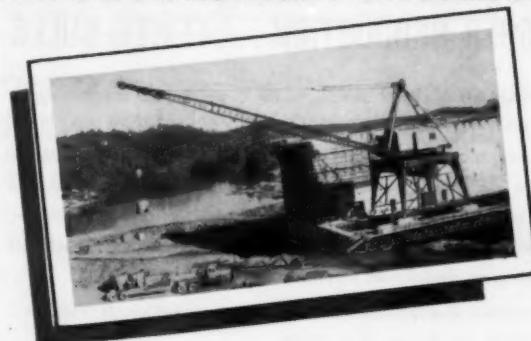


### Florida Skyscraper Has Concrete Floors Made with DAREX AEA

Apt symbol of Prudential Insurance Company's "Strength of Gibraltar" is firm's 22-story office at Jacksonville, Florida. Steel framework of skyscraper, tallest in state, weighs 6,000 tons; DAREX AEA was mixed with concrete for 400,000 square feet of floor space. Contractor: Daniels Construction Co.; Architects: Kemp, Bunch & Jackson.

### Air Entrainment Speeded Work on Arkansas Powerhouse

Shown under construction, powerhouse at Mt. Blakley Dam near Hot Springs, Arkansas, required 54,000 cubic yards of concrete, air-entrained with DAREX AEA. Now complete, dam controls floodwaters in Ouachita River valley, has two generators in \$5,000,000 power station. Mass concrete and thin walls alike contain DAREX AEA for fast, economical placement. Contractor was Al Johnson Construction Co. Corps of Engineers, U. S. Army, planned and supervised project.



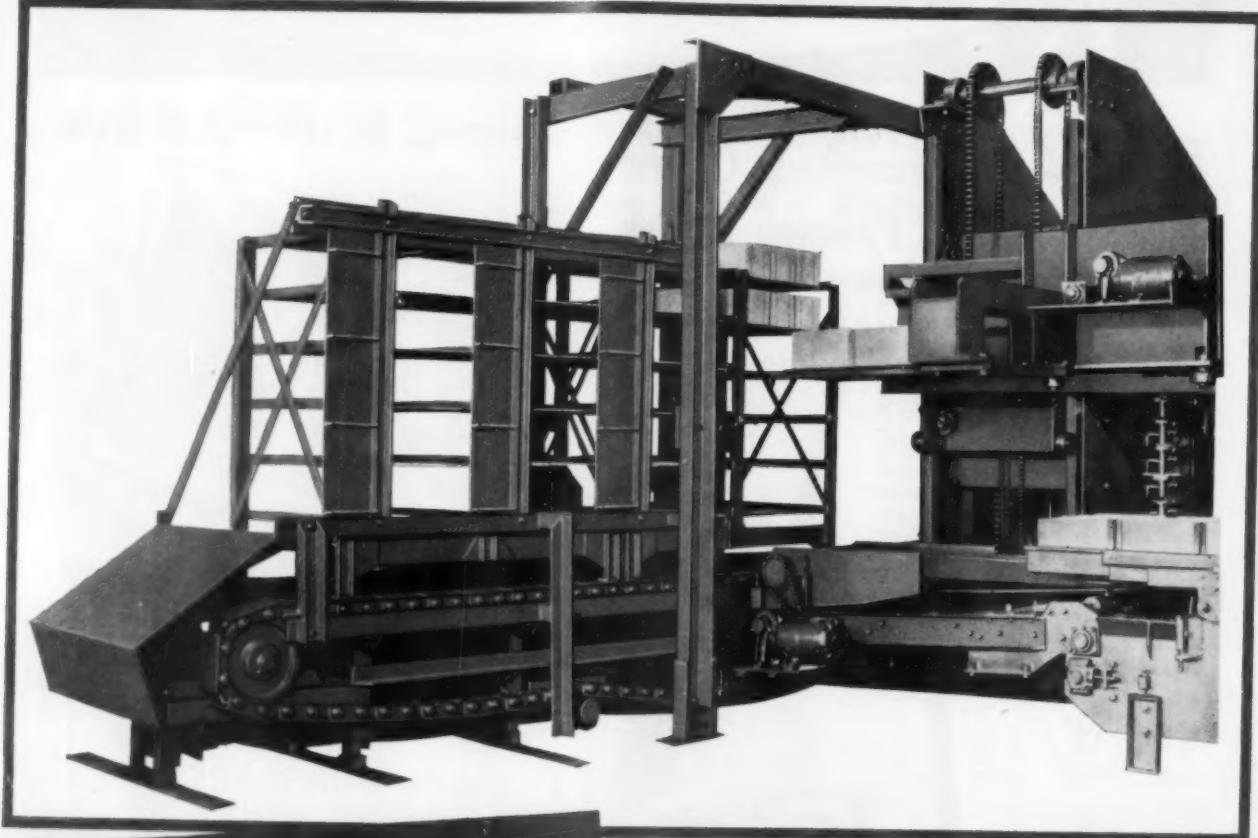
**DEWEY AND ALMY CHEMICAL COMPANY**

Division of W. R. Grace & Co.



Cambridge 40, Mass.  
San Leandro, Calif.  
Montreal 32, Canada

# <sup>®</sup>RACKMAN by GOCORP...AUTOMATIC RACK LOADER HANDLES BLOCKS AS FAST AS YOU CAN MAKE 'EM!



PAT'S PENDING

The only rack loader proven by  
more than two years in the field

## HIGHER PRODUCTION . . . FEWER CULLS

**RACKMAN** is keyed directly to the cycle of your block machine for continuous auto-operation • **RACKMAN** speeds production of any block machine even GOCORP's "SUPER" TRUSTEE (there is no faster machine on the market) • No time outs due to the human factor • No offbearing culls • Smooth, efficient, economical operation from mixer to rack • **NO PITS REQUIRED** • Compact design uses minimum floor space.

A companion piece to the **RACKMAN "Loader"** is the **RACKMAN "Unloader"**.

**RACKMAN AUTOMATICALLY** removes green blocks from your block machine and indexes them gently onto the decks of the rack.

**RACKMAN AUTOMATICALLY** removes empty pallets and returns them to the front pallet feeder of the block machine.

**RACKMAN AUTOMATICALLY** shifts racks. Your lift truck operator merely puts on the empty racks (with pallets) and takes off the loaded ones.

**RACKMAN** may be used with most high production machines.

**WRITE TODAY FOR THE NEW FOLDER ON RACKMAN BY  
GOCORP . . . FIELD TESTED FOR MORE THAN TWO YEARS**

### OTHER COST CUTTING GOCORP EQUIPMENT

TRUSTEE and "Senior" plain pallet block machines (\$14,000 to \$40,000) • Cored pallet Block Machines • Batch Mixers - 12-75 cu. ft. • Skip Loaders • Block Cubers • Magnetic Offbearing Housings • Other Supporting Equipment.

**GO-CORP**  
**ADRIAN-MICH.**

600 GRACE ST. ADRIAN, MICHIGAN  
Phone GOdless 5-7168 Cable "GOCORP"

# JULY 1957 CONCRETE

VOL. 65, No. 7 • EST. 1904 • PUBLISHED MONTHLY BY CONCRETE PUBLISHING CORP. • 400 W. MADISON ST., CHICAGO 7, ILL. • Central 6-8822

## FEATURES FOR THIS MONTH

### A Movement Westward to Learn Prestressing ..... 26

*At the end of this month more than 100 delegates from prestressing plants all over the world, plus many of the owners of prestressing operations in the U.S., will gather at the University of California for a five-day conference. Here is the schedule of sessions.*

### Public Relations, Ready Mixed, and Florida ..... 28

*Underlying principle of the public relations policy of Ready Mix Concrete Company, Ft. Lauderdale, Florida, is that its personnel should be citizens of the community, and the plant facilities and equipment should fit in with the beauty of the locale. Some of these ideas may fit into the operation of your plant. By Gary L. Marable*

### Lightweight Aggregates ..... 30

*With lightweight aggregates showing tremendous increases in use in concrete, this article is most timely. It lists many of the types available, as well as telling where they come from, how they are made, and the trade names under which they are sold. This is the first part of a two-part article. By William Grant*

### They Build a Chapel of Precast Concrete ..... 33

*Five companies build a religious center of precast sections for The Air Force on the Island of Guam. Sections were cast 12 miles away are hauled to the chapel site.*

### Ohio Ready Mixed Association ..... 33

*Despite the heat, many of the member producers of the Ohio Association gathered in Cincinnati for the two-day annual meeting. Here are some of the highlights of that meeting.*

### Costs Less with LP-Gas ..... 34

*William J. Sullivan, owner of Modern Builders Supply, Sarasota, Florida, finds that by converting his mobile units from gasoline to LP-Gas his fuel costs are lowered remarkably. By Harry J. Miller*

### Research Is Everybody's Business—Editorial ..... 56

*With the increasing inroads new products—metals, glass, and plastics—are making into the construction and building fields, the editor questions why all producers don't contribute to research. Producers who aren't are doing themselves and their industries a disservice.*

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DOUGLAS LEE, EDITOR

DONALD T. PAPINEAU, Publisher



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This is the 140th of a series of ads  
featuring leaders in the Concrete Products  
Industry who are stepping up block production  
with Besser Vibrapac machines.

## Another LEADER in the Block Industry!

Superior Block Company Develops  
Block Manufacturing into a  
**BIG BUSINESS**

In every section of the country, block plants are rapidly becoming a major factor in the construction industry. This is particularly true in North Carolina where the Superior Block Company recently completed another expansion program.

Superior Block began the manufacture of concrete masonry units in Charlotte, N. C. seventeen years ago. Five years later they installed their first Besser Vibrapac. Since then, three more Vibrapacs were added, including one for the company's new Raleigh plant. The last two machines were installed under the Vibrapac Agreement — the modern method of securing high production block making equipment.

H. M. Shaw, General Manager of Superior Block, stated he wanted "higher production machines producing quality units". The Vibrapac block machines fulfilled his requirements. And they can do the same for you. Write, today, for literature.

### **BESSER Company**

DEPT. 127, ALPENA, MICH., U. S. A.

*First in Concrete Block Machines*



\* One of the finer homes in Charlotte, N. C.  
Vibrapac block from Superior Block Company  
were used throughout.

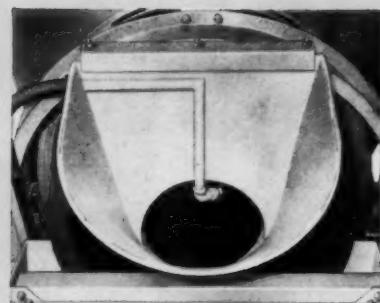


Aerial view of the new Raleigh plant  
from the block plant side. Entire plant  
comprises 9 acres.

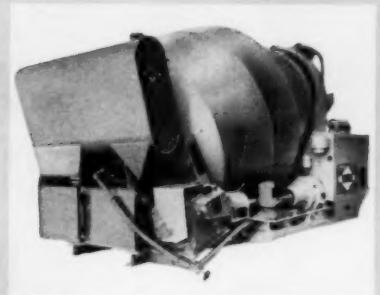
H. M. Shaw General Manager of both the  
Charlotte and Raleigh plants.

Besser Vibrapac in operation at the Raleigh plant.  
Produces up to 10,000 8" x 8" x 16" units  
(8" or equivalent) per day.





The nozzle, on the water line in the charging hopper, jets tempering and flush water against the drum shell and blades on the empty side of the drum at the charging end — the point where concrete builds up in other high discharge mixer drums. Tempering water is also mixed into the batch quicker as well as cleaning the blades and drum.



The combination pedestal and flush water tanks supports the auxiliary water tank and the front end of the drum. This patented design saves hundreds of pounds of weight and lowers the center of gravity of the water system approximately 50 inches with flush water tank and 40 inches with auxiliary tank. It also increases lateral stability and reduces tire wear.

## Only the Blaw-Knox TRUKMIXER water system gives you accurate water measurement, better cleaning of drum, and better balance due to the lower center of gravity

You get all these advantages in the Blaw-Knox Hi-Boy TRUKMIXERS that are engineered so they are easily adapted to all applications. On units furnished for on-the-job mixing, water is accurately measured by the auto-stop meter to prevent batch spoilage and enters at the head end of the drum. Only Blaw-Knox supplies this meter on all units equipped to supply mix and flush water. When it comes to cleanout, operators profit by another exclusive Blaw-Knox feature — the spray nozzle in the charging hopper jets flush water on the mixing blades and shell of the drum at the correct angle for fastest and most thorough cleaning of blades and drum. The flush water system is designed for easy conversion in the field from transit-mix, where water is supplied at the batch plant, to job-site mixing, where water is supplied from the mixer's water system. The conversion is made

by installing the auxiliary water tank and piping, without alterations to the mixer.

The combination drum pedestal and flush water tank, that also supports the auxiliary water tank, lowers the center of gravity which results in a better balanced unit. The location of the engine and transmission decreases the overall length by approximately 20 inches and allows the use of more maneuverable, shorter wheel-base trucks. Other water system features include the convenient drain cock arrangement and the optional recirculating system for cold weather work.

*The Blaw-Knox water system design is only one of the outstanding features of the Hi-Boy TRUKMIXER. For complete information, see Bulletin 2455-R. You can get it at your nearest Blaw-Knox distributor or by writing directly to Blaw-Knox Company.*

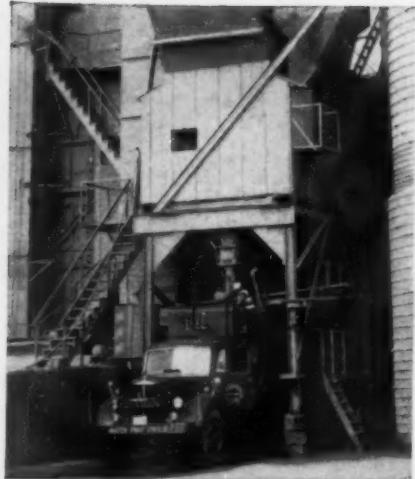


### BLAW-KNOX COMPANY

Construction Equipment Division

33 Charleston Ave., Mattoon, Ill.

**1** Ready-mix driver secures  
load at base nearest his  
most recent job. Radio tells him  
where to deliver load.



## HOW ONE MAJOR TRANSIT-MIX SUPPLIER CUT OPERATING COSTS WITH BENDIX DYNA-COM RADIO

### **Harry T. Campbell Sons' Corporation finds two-way radio boosts efficiency, eliminates delays**

Two-way radio has brought about revolutionary changes in the construction business. And they're all to the good, according to Harry Campbell, Jr., of Harry T. Campbell Sons' Corporation, Baltimore, Md. The Campbell organization, a major construction and transit-mix company, has a national reputation as the largest manufacturer of Sakrete, a widely used brand of mix-it-yourself concrete.

"The efficiency of our operation has really zoomed since we installed Bendix\* Dyna-Com Two-Way Radio," says Mr. Campbell. "We've cut out this constant movement on the part of foremen and superintendents; they can spend more time where they're really needed! We've cut waste movement, and, what's more important, we've materially reduced operating costs. We wouldn't ever be without it again."

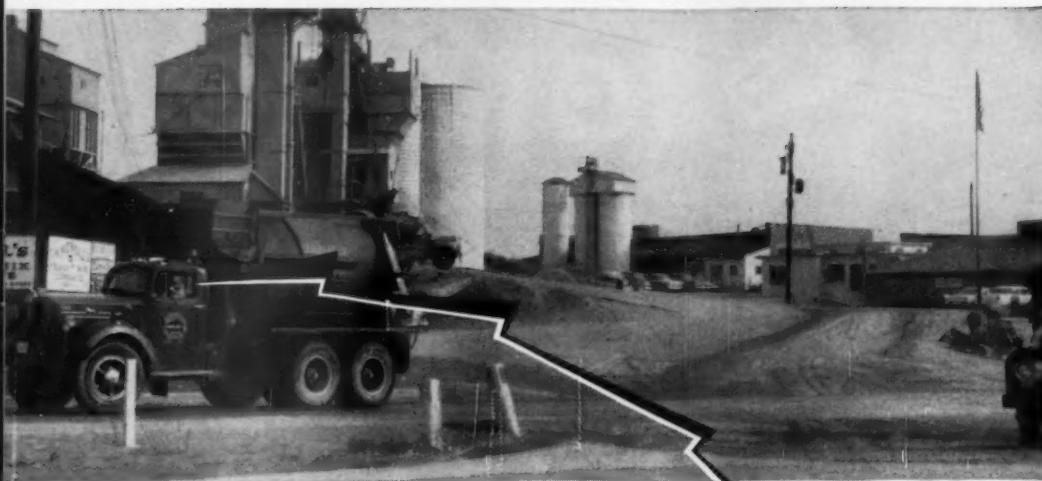
Of course, that's only a small part of the difference Bendix Two-Way Radio makes. As Mr. Campbell will

happily testify, Bendix Radio is an absolute necessity where working sites are changed frequently, especially when they're at considerable distance from field headquarters. With Bendix Two-Way Radio every phase of the construction business is speeded up. Downtime is slashed to the absolute minimum. When a vehicle needs repairs, the necessary help can be on the way within minutes. It gives the dispatcher—and through him, the boss—absolute control of every phase of the operation. It almost literally enables him to be on the scene *at every spot* where work is being done, even on vast, sprawling dam jobs or highway projects extending over many miles.

In the ready-mix field Bendix Two-Way Radio is a must. When there is an over-supply at one location, a change in delivery schedule, a breakdown or a mired truck—the situation can be corrected immediately. There's no dumping of expensive loads, no costly chipping jobs . . . and no time-consuming search for a telephone.

Whatever your function in the construction or ready-mix field, you'll find that Bendix Two-Way Radio pays for itself within months. Write for further information. Our trained technicians will be glad to tell you how Bendix Dyna-Com Two-Way Radio can help make your operation more efficient.

\*REG. U.S. PAT. OFF.



**2** Driver is on his way to job with load when he is reached by roving supervisor, who has recently visited job.

**3** Supervisor tells driver there is no need for additional concrete at original destination, directs him to other nearby job.

**4** Driver arrives on scene of new job, just at time concrete is needed. Long delay is eliminated by use of Bendix Two-Way Radio.

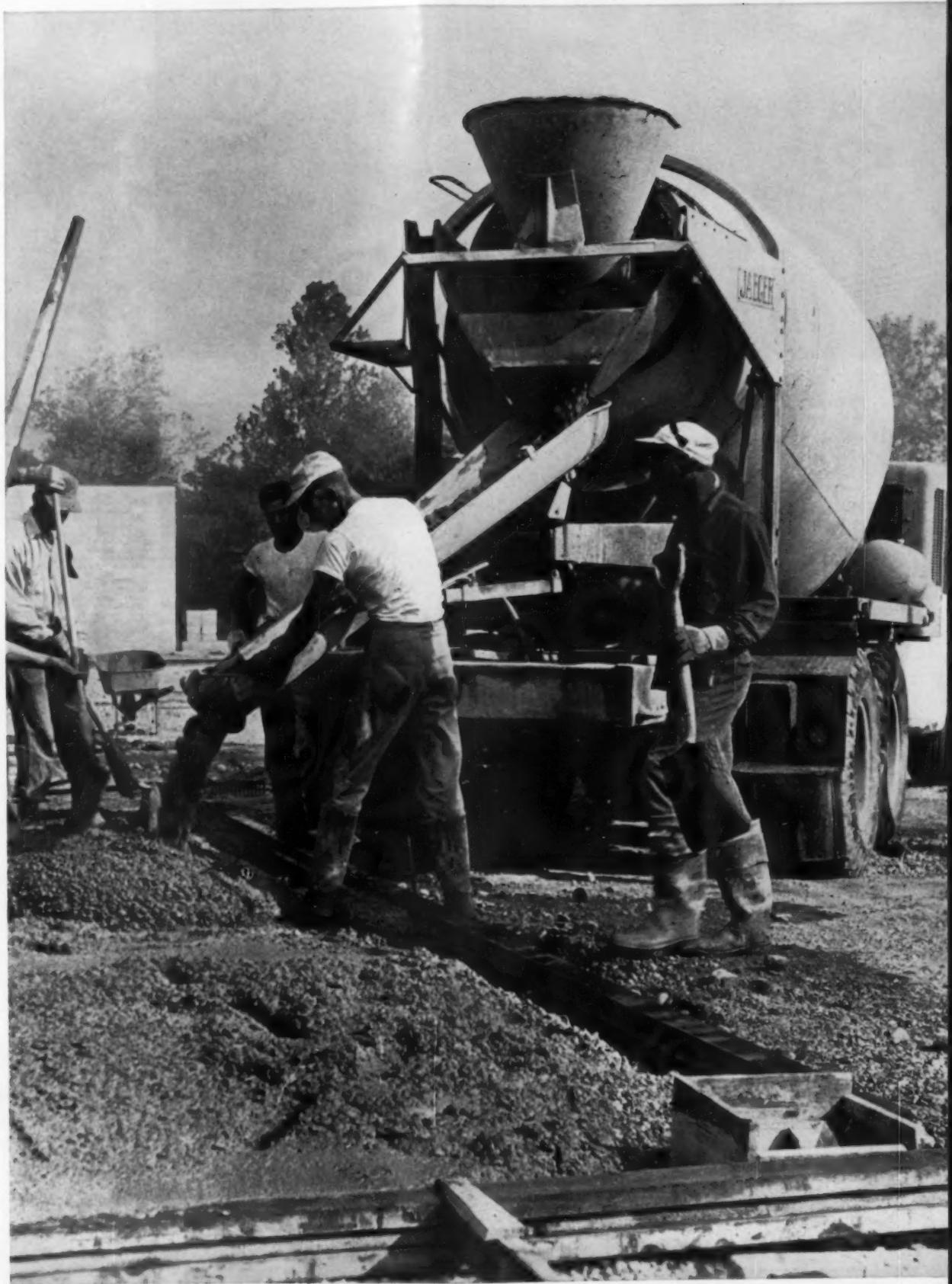


Bendix Quiet-Line unit, far left, can be plugged into any 25-54 mc. Dyna-Com Mobile unit. It banishes noise of crowded frequencies, shuts out all messages but yours. Provides optional tone-coded or conventional squelch operation.

## Bendix Radio Division

Mobile Radio Sales • Baltimore 4, Maryland







POURING MORE THAN 60,000 CU. YDS. for gigantic new St. Lawrence cement plant, on Lake Ontario.

## Top payload producer of all time . . . this great new Jaeger model "F"

**Now in these new TMMB standard mixer sizes . . . 4 - 5 - 5½ - 6 - 6½ - 7 - 9 cu. yds.**

Jaeger Model "F" truck mixers offer advancements that will enable you to produce bigger payloads, at lower operating cost, for the next 10 years.

They're lighter by hundreds of pounds, yet sturdier. Rear drum cradle is clean and open, front trunnion and drive are one "unitized" assembly.

They're faster than ever to charge, mix and discharge. Jaeger 3-speed transmissions provide 16 rpm for "fast

charging" and complete speed selection down to 1½ rpm for mixing, agitating and perfectly controlled discharge. Hopper, drum opening and blade design provides unimpeded inflow of materials and the fastest discharge of any truck mixers built today. Low slump specification concrete is discharged with particularly superior speed.

Faster trips by your truck mixers mean more trips daily — more total payload. Jaeger's new, easy-to-handle chute, alone, can save drivers minutes at the point of pour. It's wider, deeper, has quick flip-over extension and a fixed pivot, yet swings away in an instant for direct dumping.

### Powered by Separate Engine . . . or Optional PTO



**6 YDS. PAYLOAD WITH LEGAL AXLES:** 6F mixer with front pto, on GMC FW-556 truck, carries 24,300 lbs. payload with 31,445 lbs. on rear axles, 13,120 lbs. on front.

Separate engine drive with Continental engines, as used successfully on many thousands of truck mixers, is standard on the Jaeger Model "F".

Where truck engine drive is wanted, Jaeger offers the only front-of-engine pto which can be operated from either cab or ground by finger-touch hydraulic control. Operator can start, stop or reverse his drum while traveling, by a single lever movement and without any danger of shock load. Jaeger pto is easy to install at factory or in field, and extremely simple to maintain.

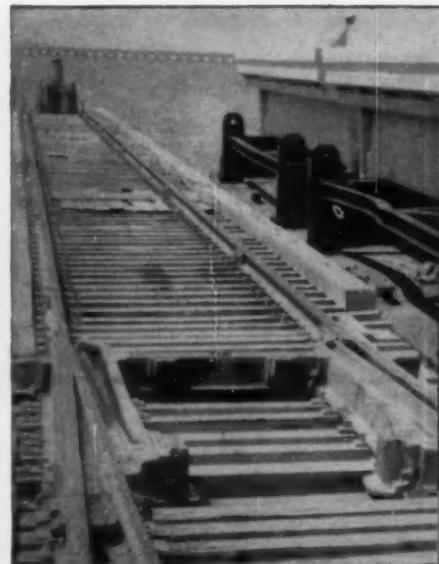
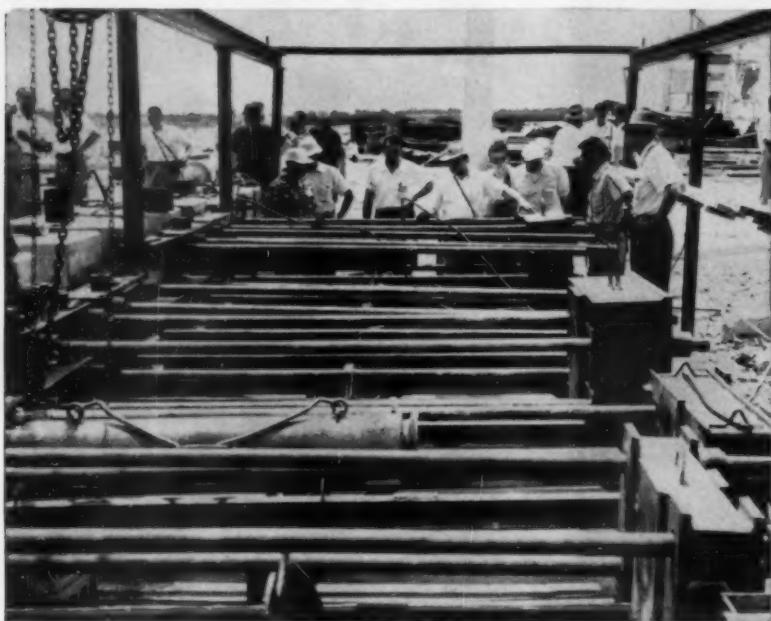
*Ask your Jaeger distributor for details — or write for Specification TMS7.*

**THE JAEGER MACHINE COMPANY**

**522 Dublin Avenue, Columbus 16, Ohio**

Jaeger Machine Co. of Canada, Ltd., St. Thomas, Ontario

# This Amazing Prestressed Concrete Industry



**Here Is a List of Prestressed Products Which A PANEL OF PIONEERS Are Prefabricating**

**Girders**

**Roof Slabs**

Regular, Lightweight, Lift, Channel, Thin shell, Hollow centers, Composite.

**Beams**

**Joists**

**Trusses**

**Columns**

**Piles and Caps**

Foundation, Marine, Fender

**Lintels**

**Wall Panels**

**Siding**

**Posts**

**Pavements**

Highway, Airport

**Stadium**

Framing, Seats

## "Future Applications of Prestressed Concrete Beyond Prediction"

These are the words of one and the consensus of opinion of others on our panel of pioneers. Other prestressed concrete products mentioned as either being prefabricated or tested and proposed are:

Missile Wings

Barges

Transmission Line Supports

Piers

Seawalls

Wharfs

Arches

Skews

Spring Board—For Swimming Pools

Off-shore Drilling

Piles

Platforms

While some of these may seem novel, many will become commonplace. Prestressing concrete for barges, for example, could very well become an industry in itself as is the prefabricating of bridge members.

## What Is Behind Its Phenomenal Growth?

This is a question which has been asked many times. Union Wire Rope Corporation has answered with the sound reasons for venturing a huge capital investment in expanded facilities and in research to master the technical know-how of producing prestressed, stress relieved, high tensile wire and strand. Without this key element prestressed concrete would still not be possible and practical.

To check our own reasons and to develop all of the fundamental facts responsible for the spreading use and acceptance of prestressed concrete,

**We Asked A PANEL OF PIONEERS In the  
Prefabrication of Prestressed Concrete Members To  
Summarize the Facts Which Has Enabled Them To  
Maintain a Yearly Growth of 200 to 300 Percent.**

What follows is straight from the horse's mouth. It is a summary of the fundamental facts contributed by a sizeable group of prestressed fabricators and consultants. All are pioneers who have had a part in the development of prestressed concrete and experienced its growth from a trickle five years ago to become the building material to be reckoned with by every factor in the building industry.



## PANEL OF PIONEER Prefabricators Cite These Outstanding Prestressed Concrete Advantages...

### 1. Fully Utilizes Two Inherent Strength Factors

Prestressing combines and enhances the inherent characteristics of two of the foremost construction materials—

- A. The compression strength of concrete with
- B. The high tensile strength of stress relieved cold drawn steel wire and strand.

### 2. Basic Economy

- A. Steel for prestressing is six times stronger than ordinary steel but only approximately 3 times more costly.

- B. Concrete for prestressing is twice as strong but only 10 to 20% more costly

- C. Prestressing consumes less steel and concrete to attain equal or greater structural strength more economically.

### 3. Structural Balance

- A. In prestressed concrete, stresses and strains are balanced to produce structures whose deflections are under definite control.

- B. Cracks, otherwise unavoidable in concrete, are eliminated by prestressing.

### 4. Design Economy

- A. Prestressed concrete makes possible thinner sections, lower depth to span ratios, longer cantilevering without ballast beams and reduction in weight. All of these factors enable the designer to effect savings in foundation, in columns, in wall height or to convert head room into usable cubage.

- B. Steady progress in standardization of sections under the auspices of the Prestressed Concrete Institute is making prestressed concrete more and more versatile from the standpoint of designers.

### 5. Prestressing Is Pre-Testing

- A. Because they are subjected to greater loads in fabrication than is imposed upon them in the field, precast, prestressed members are in reality pretested.

- B. Produced by factory methods, under closely controlled conditions, prestressed concrete guarantees the designer structural performance to meet or better expectations and affords relief from extensive supervision and inspections.

### 6. Stock Pile Availability

- A. Factory line production methods with

time saving devices insure delivery of prestressed concrete members from the production line in step with contractors work schedules.

- B. Production of prestressed sections proceeds at top speed, affording maximum utilization of labor and stockpiling against projected construction.
- C. Prestressed concrete eliminates construction delays by bypassing materials in short supply or on extended backlog delivery.

### 7. Speeds Up Construction

- A. Construction by the older, conventional methods involves both erection and fabrication on the job site.

- B. The latter is accomplished much faster in central plants or on the site mechanized plants and the resulting prefabricated units are erected with clock-like precision.

- C. Often it is possible to complete structures in half the time required by conventional methods. It is often possible to erect prestressed concrete in the time required to make, place and shore up forms for poured in place concrete.

### 8. Permanence of Concrete—Plus

- A. Well known is the durability of concrete. Well known too is its vulnerability to cracking. Cracks lay it and its reinforcing open to deterioration.
- B. Prestressing makes concrete a flexible material with the ability to withstand extraordinary deflection and recover without cracking.

### 9. Insurance Savings

Comparison of insurance premiums are

reported on new buildings with prestressed concrete roofs as against old buildings with wood roofs. Roughly the yearly premium on the latter is more than for 5 years on buildings with prestressed roofs. Though this is a comparison of extremes, it is indicative of how prestressed construction is regarded by insurance companies.

### 10. Economy of Maintenance

- A. Even in marine construction or in construction subjected to other extreme corrosive conditions, the cost of maintenance on prestressed concrete construction ranges from nil to the expense involved in painting in cases where color is desired.

### 11. Widely Competitive

- A. The initial cost of prestressed concrete is such as to enable its prefabricators to successfully bid against the permanent, fire resistant, all-weather types of construction in many types of structures.

- B. When the collateral economies effected by prestressed concrete, such as greater and more flexible strength for longer spans and fewer columns, balanced stresses and strains and controlled deflection, thinner sections, lower depth to span ratios, lower wall heights and increased usable cubage, ready availability, speedier erection, negligible maintenance and lower insurance premiums are considered, then the competitive edge is definitely on the side of prestressed concrete for a growing list of structures.

So goes the summary of the thoughts of a panel of pioneers except for a warning which was sounded: Be sure of adequate capital and technical guidance when venturing into the business.

Specialists in high-carbon wire, wire rope, braided wire fabric, stress-relieved wire and strand.  
2306 Manchester Avenue

Kansas City 26, Missouri



**Truck Engine Drive or Independently Powered—TRANSCRETES  
are real  
money makers!**



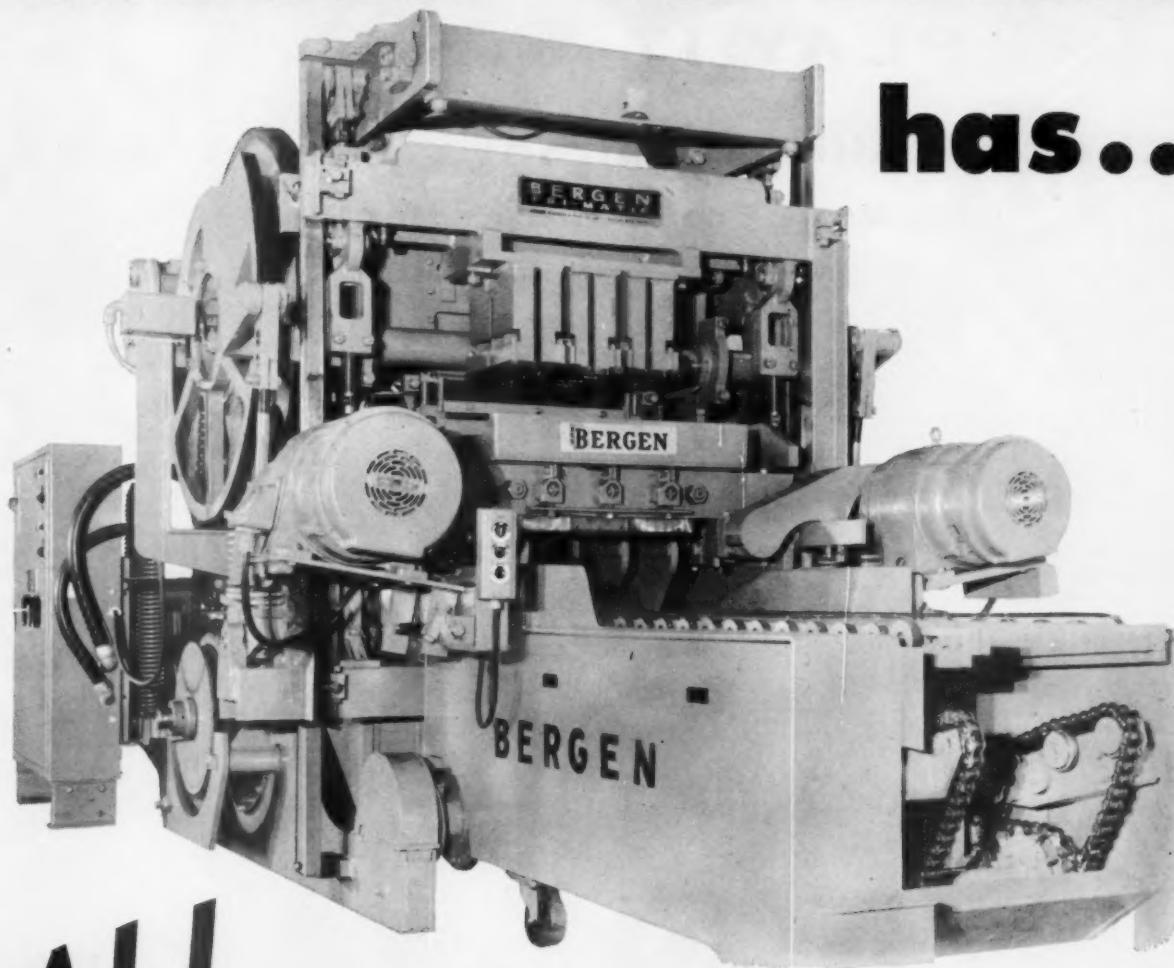
Make bigger Ready-Mix profits. Write for these  
**2 FREE Transcrete Bulletins**  
on (1) Auxiliary Engine Transcrete (2) TED Transcrete



**CONSTRUCTION MACHINERY COMPANY, Waterloo, Iowa**

# BERGEN TRI-MATIC

has..



**ALL**

**these features!**

- **HIGH PRODUCTION**  
6 mold cycles per minute  
10,000-8" equivalent units per day  
Unsurpassed, consistent performance
- **PROVEN DEPENDABILITY**  
Heavy Duty Construction  
Throughout  
 Fool Proof Cam-and-Roller  
 Operation  
 Long, Trouble-Free, Economical Service

- **ZEROMATIC HEIGHT & DENSITY CONTROL**  
Uniform density, texture and size  
through positive and automatic  
control of aggregate feed and  
vibration time
- **FRONT PALLET FEEDER**  
Exclusive Harmonic Drive attains  
Shock-Free, high speed operation

- **HIGH-SPEED HOIST**  
Special design features for high  
production operation. Smooth-  
operating . . . minimizes operator  
fatigue

*These features are incorporated  
in the BERGEN TRI-MATIC,  
but can be applied to your exist-  
ing equipment. Write to Bergen  
and discuss your block plant  
plans with Bergen engineers.*

**BERGEN MACHINE & TOOL CO., INC., NUTLEY, N. J.**

# PLAY IT **SAFE**..

## **Choose Allis-Chalmers Fork Trucks** for Both Profit and Protection!

One reason Allis-Chalmers fork trucks are so safe is that driving them is almost second nature right from the beginning. They start, steer, shift and drive like an automobile. This 6,000-lb model is stacking building panels at the Switzer Panel Corp., Corona, Calif.



**U**sers say that Allis-Chalmers fork lift trucks are the most efficient and economical they ever used — *also the safest*.

It's no accident that they give you the best possible protection for your men, equipment and material handled. From strong, automotive-type main frame to top of double-channel mast, every detail has been engineered with an eye to safety. There's a wide, low mounting step on both sides leading to a roomy floorboard that is completely clear of levers. Brakes are more than ample in size and are self-energizing both forward and backward.

Center of gravity is low. Fuel tank is placed far from the engine compartment. Because they drive like an automobile, the operator makes the right move by reflex in a tight spot.

You can measure the profits an Allis-Chalmers fork truck can make — and that's important. But safety is so important, it *can't* be measured. It is a big additional reason why you should specify Allis-Chalmers. For complete information, write for free catalog or obtain a copy from your Allis-Chalmers Materials Handling Dealer.

MATERIAL HANDLING DEPT., BUDA DIVISION, MILWAUKEE 1, WISCONSIN



# **ALLIS-CHALMERS**

BH-15E



# The new 1958 REX

ADJUSTA-WATE  
MOTO-MIXERS®



## RIGHT for Ready-Mix Service!

Here's another big step ahead by the *leader* . . . to increase your profits. Everything new in these Rex Adjusta-Wate Moto-Mixers has been put there with *you* in mind. Features so important . . . truck mixer performance actually jumps years into the future to step up today's service.

Rex has always led the field in advancements. You've seen this in all the "firsts" pioneered by Rex. You've profited from it by the quickened pace of truck mixer progress.

For these new Rex Adjusta-Wate Moto-Mixers,

Rex engineers again set their goal far ahead. **Here are the results:** truck mixers that present the biggest new set of advancements . . . ready right now when you need them most.

They are the answer you've been seeking to get your *costs down* . . . not just lower, but all-time lowest! They're the surest means yet to get your *quality-up* . . . to meet any specifications. And these new Rex Adjusta-Wate Moto-Mixers are the certain way to deliver the *best-yet service* to your customers . . . with the discharge speed and efficiency

more

on next

page

LEADERSHIP . . . THROUGH CREATIVE ENGINEERING

that win you more business because you speed up theirs!

All the new advancements of these Rex models are solidly backed by Rex leadership. For only after Rex advancements are thoroughly field

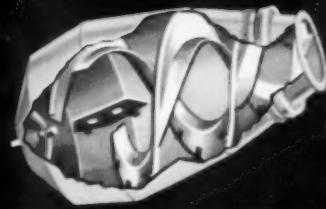
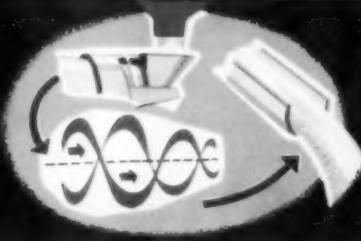
tested and 100% proved are they offered to you.

Right now ... plan to see these far-ahead 1958 models. See why now ... more than ever ... *Rex is "RIGHT for Ready-Mix Service!"* See your Rex Distributor or write for new catalog.

Why



**is RIGHT for Ready-Mix Service!**



#### **LONGER LIFE, LOWEST MAINTENANCE**

These new Rex models free you even further from time-taking service. Husky new Z-section frame is proved stronger, sounder by electronic testing. Drum blade lips are heat-treated for twice the life. There's less to clean up on these cleaner mixers ... it takes less time. This design simplicity keeps maintenance down.

#### **BEST LEGAL PAYLOAD**

All the advantages of patented Rex Adjusta-Wate design cinch it. Balance is better; "G" distance (front of mixer to center of gravity) is shorter. You get greater legal payloads on a smaller wheelbase truck ... better axle loading on any truck. You get lowest possible weight without sacrificing vital strength.

#### **FASTEAST ROUND TRIP CYCLE**

Rex again has quickened the round trip cycle. Big hopper entrance, wide throat opening and shrink blades get charge in fast. Mixing is more rapid. Flatter drum angle gets material out faster. New deep-dished chute plus greater behind-wheels discharge point increases placement range and rate.

#### **EASY, FAST OPERATION**

Controls are clustered within easy one-hand reach. A single-lever control ... conveniently placed with the smart instrument panel gives highest operating efficiency, highest discharge speed. Any operator is an efficiency expert at the discharge end! Lower costs to you and your customer.

#### **QUALITY CONCRETE YOU CAN COUNT ON**

Low slump or average ... transit or site mix. Whatever the customer wants, your Rex will deliver. Low incline drum gives better tumbling, better mixing and improved blading, plus better, more effective water distribution ... all point up quality, put you on the customer preferred list.

#### **TAILORED TO YOUR BUSINESS..AND BUDGET**

Why buy more than you want ... or less than you need? With the widest choice of options, you literally "custom-make" the machine for your operations and budget.

- 4 types of power units
- 3 types of charging options
- 3 types of water tanks
- 2 types of water systems



**ADJUSTA-WATE MOTO-MIXERS  
CHAIN BELT COMPANY**

4695 West Greenfield Avenue, Milwaukee 1, Wisconsin

**MASONRY MANUFACTURERS!** Booming business and good prospects don't go together . . . knowing where the "live ones" are—that's what you need!



## Write for a better way to make your profits go up

Advance information about new projects makes the difference between boom and bust when you do business with the construction industry. Dodge Reports not only give you early notice—they help you follow through by telling you whom to contact and when the job is out for bids (even who's bidding) on just the kind of work you want. If you'd like to know how to pin-point the "live" prospects that will help make your profits rise, just read and mail this coupon today.

TO: DODGE REPORTS, DEPT. 65, 119 WEST 40th STREET, NEW YORK 18, N. Y.

Yes! I'd like to pin-point my prospects by knowing in advance who's going to build, what, when, where.

I want to know whom to contact and when to submit bids.

I'd like to see some Dodge Reports, and I'd like a copy of your booklet that tells how to use this accurate, daily, up-to-the-minute construction news service.

I understand that I can pick just the area in the 37 Eastern States and the type of construction activity that interests me. Also, that I won't have to wade through mounds of data to find the information I need.

I'm interested in General Building  House Construction  Engineering (Heavy Construction)

In the Following Area: \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_



Why Wait to Make More Money?

# START NOW!



with The **PROVED**  
**CHALLENGE "ETO"**

(Engine Take-Off Drive)

*Pacemaker* **TRUCK MIXER**

PROVED BY  
MORE THAN 6  
YEARS OF SERVICE  
DELIVERING OVER  
5,000,000 YARDS  
OF CONCRETE

Everyone agrees that the "ETO" makes good sense . . . operating both truck and mixer with ONE engine affords greater savings in fuel and maintenance which is all MORE NET PROFIT.

#### SO . . . WHY WAIT?

You don't have to "wait and see" . . . or "let the other fellow try it first" . . . Challenge "ETO" Mixers have operated successfully for more than 6 years . . . over 5,000,000 yards of concrete have been batched, mixed and placed with Challenge "ETO" Mixers . . . operators report savings as much as \$.23 per yard.

While other manufacturers are still experimenting  
**CHALLENGE OFFERS YOU A PROVED "ETO" MIXER**



**COOK BROS. EQUIPMENT CO.**

3334 San Fernando Road, Los Angeles 65

Clinton 6-3151

EXCLUSIVE WORLD-WIDE DISTRIBUTORS FOR CHALLENGE PACEMAKER TRUCK MIXERS . . . WORLD STANDARD OF THE INDUSTRY

# INDUSTRY NEWS

## Local Chapter of American Concrete Institute, To Be Organized in Southern California, States Aims

Trial establishment of a southern California local chapter of the American Concrete Institute has been authorized by its board of directors. The board was acting upon the recommendation of a committee on regional organization.

Henry M. Layne, structural engineer, Los Angeles, heads the committee appointed to organize and operate the southern California Chapter.

The new chapter's objectives — all within the charter of the ACI — will be:

1. To work for active and continuous local interest and participation in Institute affairs, aiming simultaneously toward augmented membership and organized member effort.

2. To plan and conduct discussion meetings and group conferences for solving technical problems. Ideas and information on such problems and solutions may be passed on to appropriate national committees to expedite needed action on corrective measures or new methods.

3. To organize and carry on advisory work with other agencies and groups for correlation of code requirements, harmonizing of building regulations, explanation of and use of ACI Building Code and standards of practice, with the object of improvement of design and construction.

4. To follow and assist in the sound development of new methods and techniques, informing the Institute of information and of material for articles and papers to disseminate such information. Such activity aims at improvement in practice and effort in the field of engineering education.

5. To encourage selected research projects and scientific investigations to develop test data and techniques useful to the designers and builders of concrete construction, producers of concrete materials and products, and to the public.

6. To aid in expediting information service to the membership, by suggesting sources of information on specific problems.



● More than 1,000,000 solid 6 x 8 x 16-inch concrete units were applied to drop inlets and slope pavings below bridges on the Massachusetts Turnpike. Supplier was Camosse Brothers, Incorporated, Auburn, Massachusetts.

## Calendar . . .

1957

JULY  
10-15

National Concrete Masonry Association — Mid-Year Board of Directors and Committee Meetings — Manoir Richelieu — Murray Bay, Quebec, Canada.

JULY 29-  
AUGUST 2

University of California in Cooperation with The Prestressed Concrete Institute, International Federation de la Precontrainte, American Concrete Institute, American Society of Civil Engineers—International Conference on Prestressed Concrete — San Francisco, California.

JULY 29-  
AUGUST 2

Prestressed Concrete Institute — Third Annual Meeting — San Francisco, California.

AUGUST  
25-31

National Ready Mixed Concrete Association — Semi-Annual Board of Directors' Meeting — Manoir-Richelieu — Murray Bay, Quebec, Canada.

OCTOBER  
29-30

American Concrete Institute — Regional Meeting — Benjamin Franklin Hotel — Seattle, Washington.

November  
17-19

Southeastern Concrete Pipe Association — Tenth Annual Convention — Key Biscayne Hotel and Villas — Miami, Florida.

1958

February  
9-13

National Ready-Mixed Concrete Association — 28th Annual Convention — Chicago, Illinois.

February  
18-19

National Concrete Masonry Association — 38th Annual Convention — Chicago, Illinois.



## Look! A Dozen Concrete Handling Problems... BUCYRUS ERIE H-3 Hydrocrane Solves Them All

Problem	Hydrocrane's Solution
1. Travel time between jobs .....	Up to 50-mph travel speeds
2. Handle fragile loads .....	Precision hydraulic control
3. Set up frequently .....	Hydraulic outriggers that set in seconds
4. Work in close quarters .....	Hydraulic telescoping boom, shortest tail swing in its class
5. Make high lifts .....	Boom lengths to 38 feet (Up to 56' with jib)
6. Change boom angle often .....	Working boom hoist
7. Hoist loads rapidly .....	New selector valve greatly increases line speed
8. Reduce "down" time .....	Simple design cuts costly maintenance
9. Lift heavy loads .....	New 5-ton rating
10. Inexperienced operators .....	Clearly marked hand levers — no foot brakes
11. Work on rough, irregular ground .....	Hydraulic outriggers level automatically
12. Weighs loads .....	Load indicator

Yes, the H-3 Hydrocrane is the only 5-ton crane-excavator that does so many jobs so well. Mounted on a new or low-cost used truck, the 5-ton,  $\frac{3}{4}$ -yd. H-3 Hydrocrane is the digging and lifting package that returns more per dollar invested than any other machine in its class. Your Bucyrus-Erie distributor will be pleased to tell you all about the H-3—and about the larger, 10-ton capacity H-5.

189H57

**BUCYRUS-ERIE COMPANY**  
SOUTH MILWAUKEE, WISCONSIN

### April Construction Low: Year Outlook Still Good

Contracts for future construction in the United States in April totalled \$2,776,431,000, a decline of nine per cent compared to April, 1956, according to F. W. Dodge Corporation, construction news and marketing specialists. The April decline offset a large increase in March and, as a result, the cumulative total for the first four months of 1957 mounting to \$10,314,991,000, showed no change from the comparable period of 1956.

Contracts for non-residential building, which were a major source of strength during the first three months of this year, amounted to \$838,065,000 in April, down 20 per cent from the corresponding month a year earlier. Nearly all components of the non-residential category shared in the decline with the largest decreases taking place in the manufacturing and public building segments. For the first four months of this year, non-residential contracts totalled \$3,664,712,000, about equal to the total for the comparable period of 1956.

Contracts for residential building in April were valued at \$1,231,667,000, eight per cent below the year-earlier level. For the first four months of 1957, residential construction contracts amounted to \$4,031,007,000, down six per cent from the comparable period last year. The number of housing units represented by the April, 1957 contracts totalled 93,758, which was 14 per cent below the April 1956 level. The trend toward larger and more costly homes accounts for the sharper decline in unit volume than in dollar value of the contracts.

The dollar value of heavy engineering contracts in April was \$706,699,000, an increase of eight per cent over April 1956. A substantial rise in the utilities category more than offset a small decline in contracts for public works construction. Heavy engineering contracts, from January through April, were valued at \$2,619,272,000, up 12 per cent over the comparable period last year.

Commenting on the figures for the first four months of this year, Thomas S. Holden, Dodge vice-chairman, pointed out that "the year's record thus far seems to indicate a levelling off at the very high rates of 1956. If this trend continues, total construction activity in 1957 will run very close to the all-time highs set last year."

July, 1957—CONCRETE

## ASTM Issues New Edition of Standards on Cement

Committee C-1 of the American Society for Testing Materials has revised the publication *Standards on Cement* and has prepared a fourteenth edition. This latest edition brings the publication up to date on methods of testing and specifications for cement, as of February, 1957.

Included in one of the appendices is a Manual of Cement Testing. Its purpose is to call attention to less apparent factors which may affect test results. Recommendations supplement the standard tests and do not take their place.

While all of these standards and tentatives are published in other volumes issued by the Society, the Society suggests that this volume is a convenient special compilation. Single copies are \$3.00 and can be ordered from the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania.

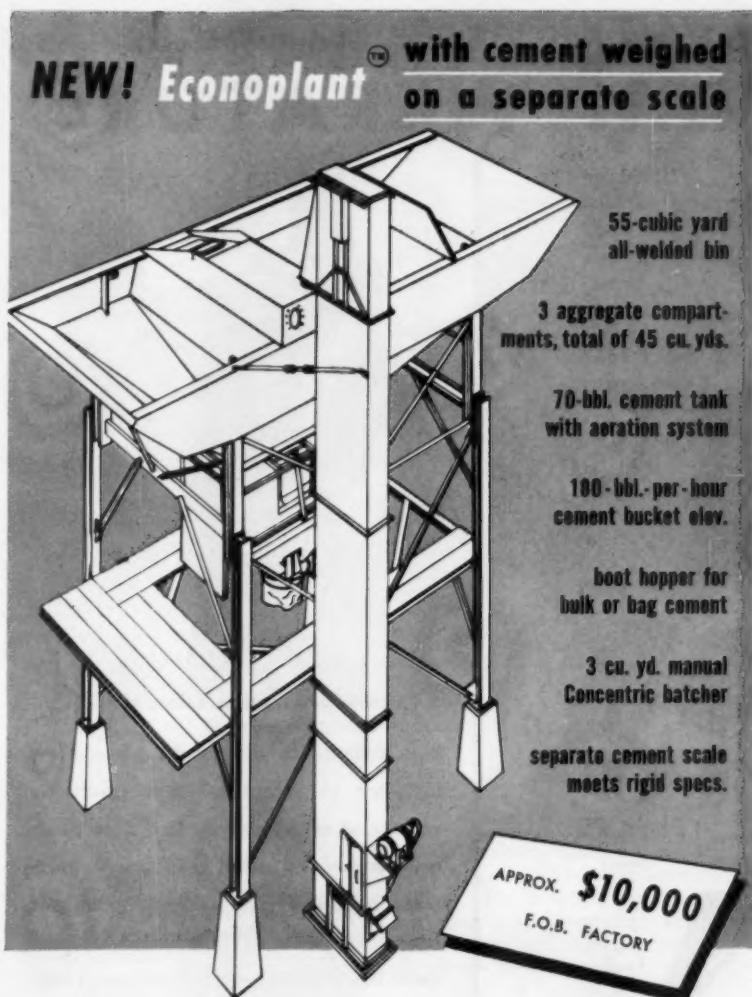
## PCA Donates Exhibit To University of Ill.

Those questioning the whereabouts of the two-and-one-half ton section



of concrete pavement used as a part of the PCA's display at the road show might be interested to know that it was presented to the Department of Civil Engineering of the University of Illinois, Chicago Division, at Navy Pier. The 10-inch-thick section of pavement, which was constructed to specifications of the Illinois State Division of Highways, will henceforth serve as a giant visual aid for the engineering students.

CONCRETE—July, 1957



Here is a low-cost opportunity to get started in the profitable ready-mix field — or modernize or expand existing facilities. At a minimum investment you can now get this new Johnson transit-mix Econoplant, complete with exclusive Concentric aggregate-cement batcher. It complies with most rigid concrete specifications because cement is weighed on an individual scale, separate from the aggregates. Centrally-located, sealed hopper discharges cement within the aggregates, minimizes dusting and pre-mixes materials.

mail today

C. S. JOHNSON CO., CHAMPAIGN, ILL. (Koehring Subsidiary)

Send us literature on new transit-mix Econoplant

ABB-W  
CONC

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

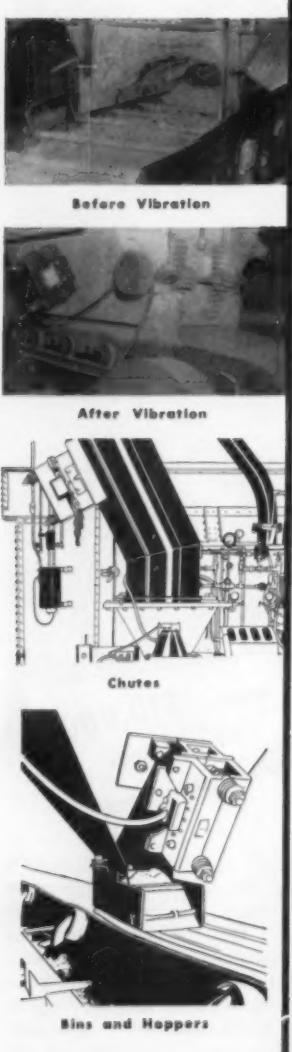
STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_



CONCRETE PLANTS • BINS • HOPPERS • ELEVATORS • SILOS • BUCKETS

# **SYNTRON** **BIN VIBRATORS**



**move bulk materials freely to help maintain production schedules**

It is difficult in the ready-mix concrete industry to maintain high production schedules when supply line slow-downs are caused by sand and gravel materials bridging and plugging hoppers, bins and chutes. **SYNTRON Electromagnetic Bin Vibrators** with their controllable Vibrations eliminate these slow downs and keep materials flowing freely through bins, hopper and chutes. **SYNTRON** builds a vibrator to meet every need. Sizes from 4 lbs. to 1000 lbs.

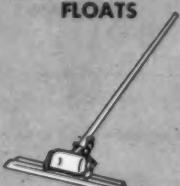
*Builders of quality equipment for more than a quarter century*

## **Other SYNTRON Equipment of proven Dependable Quality**

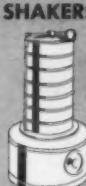
**CONCRETE FORM  
VIBRATORS**



**VIBRATING CONCRETE  
FLOATS**



**TEST SIEVE  
SHAKERS**



**Write for complete catalog data — FREE**

**SYNTRON COMPANY**  
324 Lexington Ave. Homer City, Penna.

## **Texcrete Builds Plant Near Shreveport, La.**

An entirely new \$1,000,000 structure has replaced the two smaller facilities that used to house the operations of the Texcrete Company of Shreveport. The new plant is on a 14 1/2 acre site at Bossier City, across the river from Shreveport, Louisiana. Maximum capacity of the plant will be between 8 and 10 million concrete block, plus more than 45,000 tons of other concrete products.

## **Rain, Rain, Go Away, and Take the Slump With You**

The *Milwaukee Journal* reported recently that a prolonged slump in construction, particularly in the Milwaukee area, is the object of concern to basic building materials fields.

Block producers complain that business is 20 per cent lower than a year ago. A sales dip in the last few months has brought on some price cutting, and prices are generally down now to about the same level as 1948. Producers attribute this decline to poor weather conditions which have slowed home building.

Business has been slower for producers of ready-mix concrete, also, as weather conditions have held back highway construction. However, it is hoped that the decline can be made up for at the end of the season if there is a mild fall and late winter.

## **Mr. Besser Is Recipient of Frontiersman Award**

Jesse H. Besser, president of Besser Company, Alpena, Michigan, was one of five Michigan citizens to receive the Wolverine Frontiersman Award this year. This award is made to those citizens who have opened up new frontiers with advanced ideas or with progressive accomplishments in the professions, liberal arts fields, business and industry.

Mr. Besser was selected to receive the award because of his whole-hearted contribution to the building industry.

## Lists 7 Steps to Curb Union Monopoly Power

Ernest G. Swigert, president of the National Association of Manufacturers, and also president of the Hyster Company, proposed the following seven steps to curb what he termed "the monopoly power now exercised by labor unions."

1. Real bargaining at the local level and an end to the domination of bargaining by international unions;
2. An end to compulsory union membership in any form;
3. An end to organizational picketing to force people into unions;
4. A ban on boycotts and on clauses in contracts which provide for boycotts against other employers;
5. A ban on economic waste in the form of featherbedding on output, unneeded employees, and refusal to allow new machines or processes to be used;
6. A modification of the doctrine of federal preemption so that state and local authorities can reassume their responsibilities in labor-management matters;
7. A prohibition against the use of union funds and union staff employees for partisan political purposes.

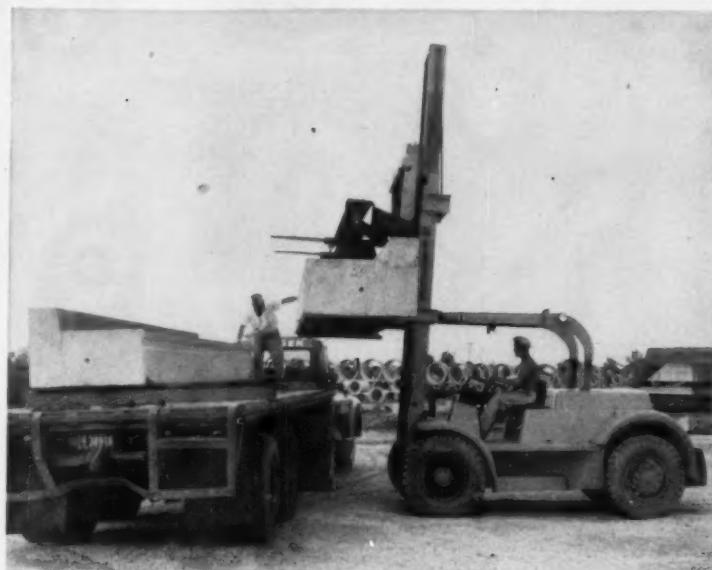
## Cement Production

Statistics for March 1957 production of finished portland cement, prepared by the Bureau of Mines, United States Department of the Interior from reports of 162 plants in the United States and Puerto Rico, show a decrease of three per cent from March 1956. Total production for the month this year was 22,642,000 barrels.

Shipments of 20,551,000 barrels for March 1957, as compared to the 22,222,000 barrels of March 1956, were down by eight per cent, despite the fact that nine districts were higher this year. Eastern Pennsylvania-Maryland and New York-Maine districts showed the greatest increases.

Mill stocks of 34,267,000 barrels of finished portland cement were on hand March 31, 1957. This is 15 per cent higher than the 29,868,000 barrels on hand March 31, 1956.

## LIFT TRUCK SPEEDS HANDLING OF MULTI-TON PRECAST BRIDGE SLABS



Loading out an eight-ton bridge section



Hyster 200 also transports pipe



Boom attachment handles pouring bucket

EAST ST. LOUIS, ILLINOIS — Using only two men and a Hyster 20,000 lb. capacity lift truck, the Nelson Concrete Culvert Co., Inc., quickly loads out precast concrete bridge slabs weighing up to ten tons. Previously four men and a large truck mounted crane were required for this operation.

Because the Hyster 200 is exceptionally maneuverable, aisle requirements also have been sharply reduced. Result: Extra storage space at no extra cost. And, severe mud conditions and uneven terrain in the yard don't affect production schedules in bad weather. The high tractive efficiency and mudability of this truck enables full production the year around.

You can make impressive savings in handling costs, too. Ask your Hyster dealer to show you the Hyster movie, "Concrete Progress", devoted entirely to money saving materials handling practices. Or, write for booklet, "Effective Ideas For Handling Concrete Products".

Call your Hyster Dealer.  
He is in the yellow pages  
under "Materials Handling"  
or "Trucks-Industrial"

**HYSTER**  
COMPANY



**Hyster Industrial Trucks Increase Profits  
for Concrete Products Manufacturers**

Factories: PORTLAND, OREGON

DANVILLE, ILLINOIS

PEORIA, ILLINOIS

NIJMEGEN, THE NETHERLANDS

## New Products Salesman at Universal Concrete Pipe

D. L. (Larry) Miller has announced that he will be in charge of sales at the Zanesville, Ohio, plant of Universal Concrete Pipe Company, a division of American-Marietta Company of Chicago. Mr. Miller will supervise the sales of concrete block, concrete pipe and prestressed concrete bridge decks in five Ohio counties: Muskingum, Guernsey, Noble, Morgan and Perry.

■

## T. L. Smith Company Introduces New Mixer

At an industry press luncheon on June 12, at Milwaukee's University Club, R. W. Smith, president of T. L. Smith Company, introduced a revolutionary new turbine-type mixer for the precast concrete products and ready-mixed concrete producing industries.

As host to some forty representatives of publications in the general construction field, Mr. Smith told of his discovery of this new mixer on



his recent trip to Europe as a member of a group sponsored by the Young Presidents Association.

Following the luncheon, Mr. Smith and other company officials took the group to the nearby plant of Waukesha Block Company where one of the new mixers has been in actual production operation for some time. Within successive minutes the same mixer was operated to produce alternate concrete batches for both block and ready-mixed concrete plants.

The new mixer will be manufactured and distributed exclusively in this country by T. L. Smith Company under a license agreement with the inventor, Mr. Erik Fejmert, of Sweden.

(A completely illustrated and detailed story of this new mixer will be found in the News From the Manufacturer section of this issue.)

# Everybody's Business

## INTEREST

- Rates on borrowing money, which for very short periods during the last few months had seemed to be leveling off, climbed back on the upward spiral again during the first weeks in May. Short-term Treasury bills reached a new 24-year high; they sold for 3.404 per cent.
- Costs for private industry borrowing increased also. Financing by Southern Bell Telephone went at a cost of 4.91 per cent, highest for this company since 1929.

## PRODUCTION

- May's industrial production was down slightly, making this the third straight month for a decrease. According to the Federal Reserve Board, output during May stood at 143 per cent of the 1947-49 average, one point below the April figure for this year. May's total, though, was still above that recorded a year ago.

## PRICES

- It seems likely that rates for goods moving over the railroads will be in for another boost in the near future. Probable increases will be in the neighborhood of the 10-to-17 per cent the railroads are requesting.
- Contrary to other signs of weakness in the petroleum industry, Sinclair Refining Company recently raised its prices slightly for gasoline and light fuel oils.

## LABOR

- What might be a pattern for future bargaining requests by unions represented in ready mixed and concrete products plants was brought to light recently in bargaining plans of a group of six local unions acting for 21,000 Los Angeles hotel and restaurant employees. One of their requests, to be negotiated this fall, is for employer-financed legal aid, similar to health and retirement plans already in operation.

## TAXES

- Refunds for excess fuel taxes collected during the fiscal year ending June 30 must be requested before September 30. Pamphlets, available at local Internal Revenue Offices, give the procedure required in filing for these tax refunds.
- So far this year, three states have increased their gasoline tax. Effective March 15 Indiana's tax went up two cents per gallon; Utah's increase of one cent was effective May 13; and on July 1 South Dakota's tax went from five to six cents. Twelve other states are at present considering future increases.

## CONSTRUCTION

- Home building, which for a year has been lagging way behind the economy of most of the other industries in this country, snapped out of its doldrums somewhat during the month of May. The annual rate of housing starts increased to 990,000, compared with annual rates of 940,000 in April of this year and 880,000 in March of this year. The May figure was still below that recorded a year ago; then the annual rate stood at 1,146,000.

## PLANT NOTES

Arizona Precast Concrete Company, Mesa, Arizona, has increased its annual production capacity from 7 million to 11 million block per year with the opening of a new plant at Phoenix.

Quartzite Stone Company near Lincoln, Kansas, is installing equipment for the manufacture of special concrete pipe units.

Ken-Crete Products Company, Incorporated, of Truesdell, Wisconsin, is adding a \$125,000 ready-mix plant to their present concrete block and tile operation. The plant is expected to be in production by mid-July.

Newly incorporated, Southwest Concrete Materials Corporation has announced the opening of executive offices at Little Rock, Arkansas. The company is planning an \$800,000 plant at Poyen, Arkansas, for the production of lightweight expandable aggregate and for the manufacture of pre-stressed concrete slabs for walls, roof decks and bridges.

The Gifford-Hill Western Company of Lubbock, Texas, will open a second plant soon in Garden City, Kansas. The plant will manufacture concrete pipe of all sizes ranging up to 30 inches.

Newly incorporated Nix Ready Mix Concrete Company at Henderson, Kentucky, will deal in concrete products and construction.

The Cascade Block Plant of Grants Pass, Oregon, is now open under new management for the manufacture of concrete and pumice building block. The plant is newly equipped with a large mixer, a conveyor and a block machine, plus a steam kiln for curing pumice block.

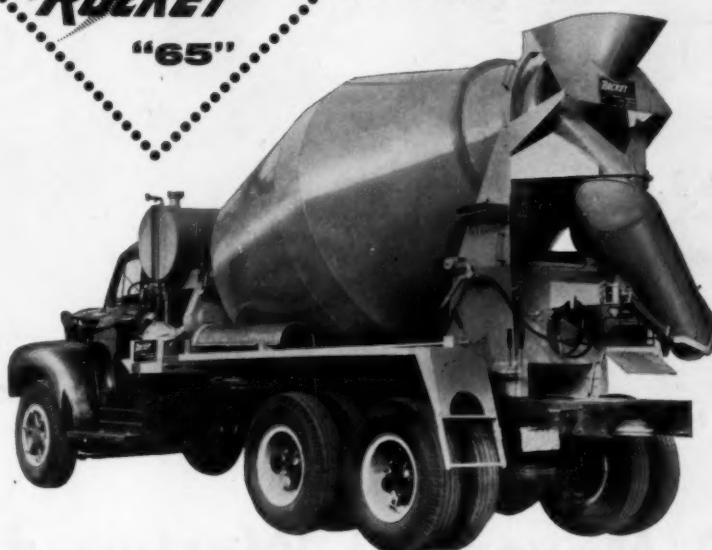
Universal Ready Mix Company has been incorporated with offices in Columbus, Ohio, to furnish ready-mix concrete and allied products to the building industry.

Cotati Aggregates, Incorporated, at Cotati, California, is open for business. It is equipped to produce and deliver ready-mix concrete.

Seldom do you find a piece of machinery that combines the strength, durability and dependability of a WORKhorse with the speed and mobility of a RACEhorse. But that's what ready-mix operators are saying about the new Rocket "65"—a versatile 6½ to 7 yard mixer. The Rocket is designed and engineered to operate for years at maximum efficiency, with surprisingly little maintenance. Every conceivable ease-of-operation feature, plus tremendous strength, has been built in.

After you've bought a Rocket, you'll agree that it is both the workhorse and racehorse of your fleet!

Also available in 3, 3½, 4, 4½, 5, 5½, 6 and 6½ yd. models.



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steel used at all wear points.

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one-piece cast steel  
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**DEMAND THE  
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- New Rocket Revolving Drum Truck Mixer**
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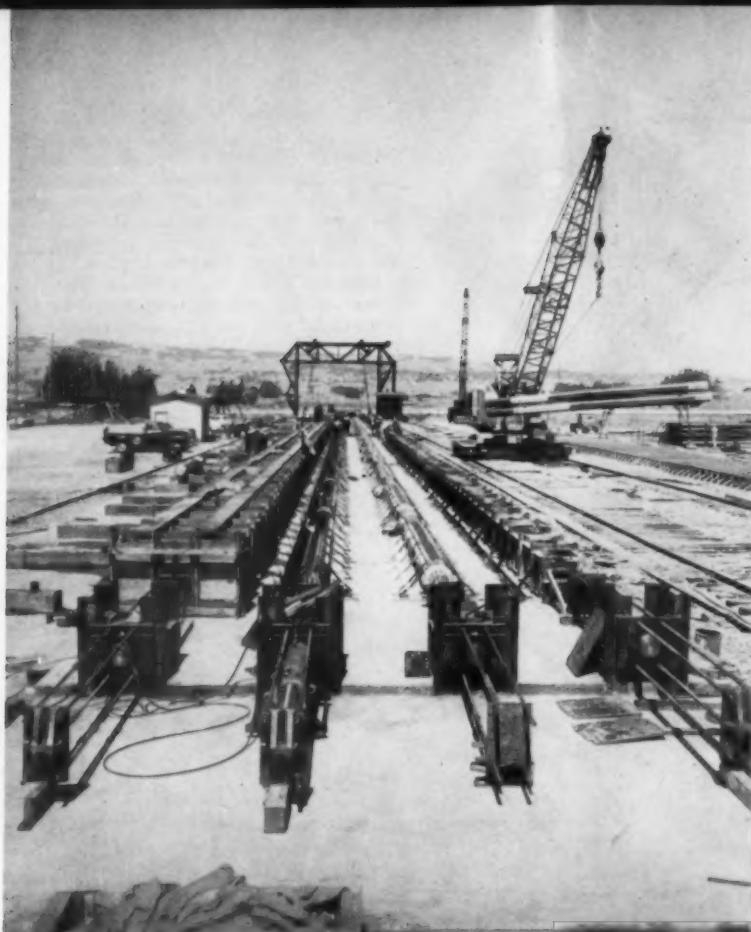
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● Ben C. Gerwick's 500-foot, 4-line pretensioning bed at Petaluma.

## A Movement Westward To Learn Prestressing



● Guiding Hands of the conference: seated left to right are Ben C. Gerwick, Jr., Robert Singer, Professor T. Y. Lin, and Harold A. Price. Standing are Professor A. C. Scordelis, Kenneth L. Downes, Jr., Jack Streblow, and Professor J. W. Kelly.

A look at the tentative program for the five-day World Conference on Prestressed Concrete, opening July 29 at the Fairmont Hotel, San Francisco, suggests that this will be the most comprehensive affair on prestressed concrete ever attempted.

Indications are that world-wide importance is being attached to the range of technical information being discussed and presented to those in attendance. Early registration responses indicate over 100 delegates from 30 foreign nations will be present.

Bertram D. Tallamy, administrator for the Bureau of Public Roads, Department of Commerce, has been chosen as the principal speaker at the banquet scheduled for Thursday, August 1. Professor T. Y. Lin of the civil engineering department, University of California, will preside at the banquet. Professor Lin is the program chairman for the conference.

One of the highlights of the five-day affair will be field trips to two prestressing plants in the San Francisco area. Inspection tours will cover the Petaluma plant of Ben C. Gerwick, Incorporated, and the facilities at Napa, California, of the Basalt Rock Company, Incorporated.

Details on the prestressing conference, registration blanks, and hotel information are available from: Department of Conferences & Special Activities, University Extension, University of California, Berkeley 4, California.

The tentative program for the World Conference on Prestressed Concrete, as announced by Harold A. Price, chairman of the publicity committee, follows so that those planning to attend can check the items of particular interest to them.

### Monday's Program

Prior to the Conference's official opening, the Prestressed Concrete Institute will hold its Third Annual Membership meeting and Breakfast. PCI president J. Ashton Gray then will officially open the Conference by welcoming the delegates. He will be followed on the program by Philip H. T. Gooding, general secretary, International Federation for Prestressing. Keynote address will be given by W. E. Dean, assistant state highway engineer, Florida.

L. H. Corning, chief consulting structural engineer, Portland Cement Association, will preside over the afternoon session which will be devoted to a discussion of materials and techniques. There will be a re-



● Concrete products of wide variety are stored in the yard of Basalt Rock Company's Napa plant.

ception for delegates and visitors that first evening.

#### Tuesday's Program

The opening session on Tuesday morning will be on prestressed concrete bridges. Chairman for this session will be G. S. Paxson, assistant Oregon state highway engineer. Mr. Paxson is chairman of the bridge committee of the American Association of State Highway Officials.

A panel discussion on techniques and methods, led by Martin P. Korn, will be a part of the Prestressed Concrete Manufacturers' luncheon program.

Tuesday afternoon's session, on prestressed buildings, will be under the direction of Nathaniel A. Owings, general partner of Skidmore-Owings & Merrill, architects.

At 8:30 p.m. technical films will be shown by Professor W. L. Lowry, Jr., head of the civil engineering department at Clemson College, South Carolina.

#### Wednesday's Program

The morning and afternoon sessions on Wednesday will be devoted to visiting the prestressing yards of Ben C. Gerwick, Incorporated, and Basalt Rock Company, Incorporated. Enroute to and from these plants stops will be made at sites where prestressed concrete is in use.

That evening technical films, with commentary, will be shown. This session will be conducted by C. C. Zollman, consulting engineer, Springfield, Pennsylvania.

#### Thursday's Program

The morning session will be on design and construction in various countries. E. J. Ruble, Association of American Railroads, is the chairman.

J. Ashton Gray, president of the Prestressed Concrete Institute, will preside over the Prestressed Concrete Manufacturers' luncheon at noon, during which the discussion will center on marketing of prestressed concrete products.

Prestressed pavements, wharves, piles, and poles will be taken up

during the afternoon session. Presiding during this session will be H. Layne, president, Structural Engineers Association of California.

The banquet, Thursday evening, as mentioned previously, will have as its principal speaker, Bertram D. Tallamy, Bureau of Public Roads, Department of Commerce.

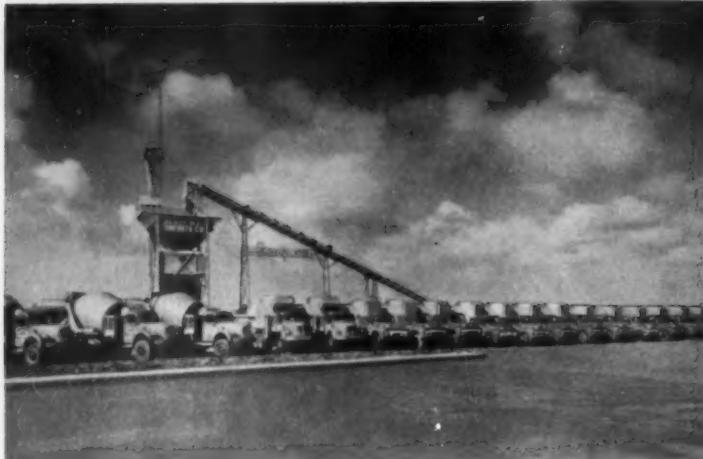
#### Friday's Program

Research on prestressed concrete will be the subject of the last morning's program. This session will be conducted by Walter H. Price, American Concrete Institute president and chief of the Engineering Laboratories of the U.S. Department of Reclamation.

The afternoon session will have as its topic, fabrication in various countries. It will be presided over by Harold A. Price, manager, structural products division, Basalt Rock Company, Incorporated.

Professor T. Y. Lin, program chairman, will close the five-day conference with a summary of the proceedings.

# Public Relations, Ready Mixed,



● At all times when Ready Mix Concrete Company's trucks are not in use—delivering to a job or being filled with mix—they are parked in a neat line in the yard so as to make the best possible impression on the passing public. Three plants comprise the operation, one at Ft. Lauderdale, another at Hollywood, and the third at Pompano Beach.

by **GARY L. MARABLE**

Ready Mix Concrete Co., Inc.

*Here's an integrated public relations program designed for a Florida producer but applicable throughout the country.*

PUBLIC relations—or gaining public acceptance—begins with every contact our company, its equipment and personnel, makes with the public. Such contacts may be visual—one of our trucks traveling the highway or standing at a job waiting to pour; or personal-contact over the telephone or a salesman calling on a client.

The Ft. Lauderdale area is a wonderful section of this country—the city itself is beautiful, bright, colorful, and clean. Our plants in the vicinity would be out of character if they did not conform to this picture. We have, though, reached a working agreement with the ready-mix plant's universal problem—dust; we paint the exterior of our buildings gray. The expense of keeping a clean-up crew and lots of paint on hand is an excellent investment in gaining favorable public opinion.

This applies to our trucks, also. The manner in which they are kept causes a reasonable amount of favorable comment from customers, competitors, and the general public. When possible, each driver is assigned a specific truck. Then it becomes his responsibility to keep it clean, both inside and out. His job depends upon it. As a result, each driver, and the entire organization, takes pride in maintaining a clean fleet.

Our trucks are painted Coca-Cola red and apple green, and the lettering is white. These are real Christmas-tree colors and are so conspicuous that they must be kept freshly painted and bright. We are not reluctant to repaint a truck when it begins to look rough.

At night when our trucks are not in use, they are parked in an orderly line in our lighted yards to impress our neighbors and the public driving by on the nearby highways.

Either parked or moving on the streets, our brightly

# and Florida



painted, eye-catching trucks constitute an effective string of bill boards and are part of our outdoor advertising program.

There is another important portion of our public relations program in which our drivers participate. Each driver is carefully screened before being hired. After he enters our employ he is given training in courtesy, as well as in company policy and the care of his truck. A part of our policy is to expect our drivers to be clean-shaven and neat.

Our courtesy policy extends into our office operation. We give strong support to courteous handling of telephone calls, whether the caller is a customer placing an order, or somebody registering a complaint. This same consideration is given to the visitor in our office and to the man handling concrete on the job. We are sure that courtesy is one of our most effective tools for developing and maintaining good public relations.

Though we are vitally concerned with selling concrete, first, last, and always, our company's promotion, advertising, public relations, is not always specifically directed toward selling concrete. Of equal importance is the responsibility we have to the community. By participating in civic and local affairs, and encouraging our employees to do likewise, we build up good will and cement relations with the banker, zoning board, and municipal, county, and state departments.

One way of achieving these aims is by the displaying of signs on our trucks in behalf of such causes as Kiwanis Club work and Community Chest drives. Although few of the members of such organizations are builders, or users of concrete directly, they are leaders of the community and, as such, influence community thinking as

to our standing as citizens in the community.

Another tool we have used to create good will is the two-way radio installed on all of our rolling equipment. Any driver who comes upon an emergency situation may radio the needs—wrecker, police officer, ambulance, inhalator—to the central office, which, in turn, relays the message to the proper authorities.

Our advertising campaign and promotion program is a continuing mainstay to the organization. Despite the fact that some of us on the staff have had experience in radio and newspaper work, we do not have as much time as is necessary to properly carry out such a program. Many of the promotion ideas we have can be carried out to best advantage by our advertising agency. The agency is our advertising expert; we deliver the raw materials, and they mold them into usable form.

From our combined efforts, we have found that effective advertising capitalizes on public interest. During National Fire Prevention Week, our ad called attention to the fire-proof quality of concrete. In another instance we ran a series of ads pertaining to our city's need for more sidewalks. One ad pictured an officer of the planning board and ran his statement in behalf of this need. Shortly thereafter, a front page article appeared in the newspaper, and the program was under way. One other timely ad showed headlines written on Doom Town and capitalized on the ability of concrete to withstand atomic blasts.

An important result of an effective public relations job is the opportunity afforded to take advantage of favorable and free publicity. When controversial issues come up, newspapers are quick to report the attitudes of companies in the community. If we enjoy good relations with newspaper, radio, television, and if we have something to say that is of news value, chances are good that our ideas will be printed or broadcast. We maintain these relations by reporting the newsworthy occurrences of our plant. Items such as the addition of plant facilities and the undertaking of an important job we have contracted, are of public interest. Industrial advancements are vital news. These stories, prepared by our agency and coupled with photographs, are our basic publicity-getters.

New ideas, new ways of doing things, make the headlines, too. Along with two other local concrete companies, we donated money to charity at Christmastime in the name of some of our customers. This idea brought us two feature stories and good public reaction.

Our unusual Christmas decorations served as plant publicity because they could be seen and enjoyed by people for several miles around. We strung up an electric Christmas tree atop our 100-foot radio tower, and our conveyor unit served as the course for a lighted Santa Claus, sleigh and reindeer.

Of course, the meat of our public relations program is the selling of our product. Our efforts must be informative about concrete—what can it do? what are its properties? what are the advantages of its use? what are the recent industrial advancements in its manufacture? Further, we try to educate the public in the terms of our industry: ours is a ready-mix concrete plant, not a "cement" plant, and we pour concrete sidewalks, not "cement" sidewalks.

When you come right down to it, if we have a fundamentally educational program combined with a clean plant and equipment, participation in local affairs, an awareness of sources of favorable publicity, and an operation deserving of public approval, we can't help but sell.

# Lightweight Aggregates

by WILLIAM GRANT

Consulting Engineer

First half of a two-part  
article. Part II next month.

DURING the past decade considerable development has been accomplished in the field of lightweight aggregate production. The rapid expansion in the use of block made from lightweight aggregates and their acceptance for building construction, indicates a growing trend which is likely to continue as the advantages of lightweight materials become better known and accepted by architects and builders.

The increasing demand for reduction in weight in structural buildings, and the fact that this requirement can be met through the use of lightweight masonry units, accounts for their growing popularity. Lightweight masonry units possess such qualities as strength, fire and thermal resistance, sound absorption, nailability, and variety of textures. These textural effects are utilized for interior masonry construction in churches, schools and homes.

Modular 8-inch, hollow, load-bearing, air-dry lightweight units of two and three cell design average about 30 pounds or less, compared with sand-gravel or crushed stone units weighing 40 pounds or over.

Lightweight aggregate materials may be classified into three divisions: natural, by-product, and manufactured.

The natural aggregates are of volcanic origin and include such materials as pumice, perlite and some cinders.

By-product aggregates include cinders from power plants and processed slag from steel mills.

Manufactured aggregates are produced from clay or shale.

**PHYSICAL PROPERTIES** — Physical properties of lightweight aggregate should be given special attention: high absorption, irregularities in the shape of the particles, and low density are factors which must be considered in determination of the final grading. For this reason, it is impractical to recommend a specific grading suitable for all types of lightweight aggregates—too many variables exist. ASTM specification C331-53T allows considerable latitude in the proportions of the different sizes of acceptable grading of lightweight aggregates.

Producers of lightweight aggregates generally ship their product in two size groups; material passing the  $\frac{3}{8}$  inch screen and remaining on the #4 screen is taken as the line of demarcation between the coarse and fine material. This division helps to eliminate the problem of

segregation which is more pronounced in lightweight aggregates than in heavyweight types because of the difference in bulk specific gravity between the coarse and fine sizes.

Among the important properties of lightweight aggregates are unit weight, grading, and strength. These qualities determine to a great extent the weight of the product and the cement requirements for given strength specifications. Likewise, control of the quality of masonry units depends to a great extent on the uniformity of the unit weight of the successive shipments of an aggregate.

Dry loose unit weight of graded lightweight aggregate varies considerably; it ranges from 40-to-70 pounds per cubic foot. Highly clinkered coal cinder aggregate tends toward the higher weight.

Particles of the aggregate should be sufficiently strong to withstand pressure or tamping. Otherwise, they may be broken down in the mixer or in the mold box of the machine, thus presenting new surfaces which are not coated with cement-water paste.

Because of the friable nature of some lightweight aggregates, modification of the mixing technique may be necessary. Overloading the mixer should be watched carefully, since a grinding action will pulverize some of the aggregate.

When aggregate contains an excess of coarse material ( $\frac{3}{8}$  to  $\frac{1}{2}$  inch), segregation may take place in the mix as it is delivered to the block machine. Also, an excess of coarse material tends to cause bridging of the particles, especially in units having thin face shells and webs. Good plant practice demands that the largest size of the aggregate should not exceed  $1/3$  the thickness of the thinnest bearing section of the unit produced.

**ABSORPTIVE QUALITIES** — Most lightweight aggregates have high water absorptive qualities. Therefore, certain precautions should be taken when processing such aggregates.

The water content must be carefully controlled. Many failures of lightweight aggregate block can be attributed to this cause. The amount of water necessary for a mix is governed to a great extent by the absorptive qualities of the aggregate. The volume of water required in some instances may be several times the amount necessary for

sand-gravel aggregate mixes.

With some types of aggregate, it is difficult to incorporate the required amount of water in the time allotted to the mixing operation. Under these circumstances, the aggregate should be presaturated in the stockpile. After thoroughly mixing the aggregate, the cement and the balance of the required water should be added and the mixing operation continued.

**CEMENT REQUIREMENTS** — Generally, more cement is required to produce compressive strengths equivalent to those of dense concrete mixes. The selection of the type of cement best suited to the requirements must be given consideration in order to produce the type of unit having the desired qualities.

In lean mixes of lightweight concrete, the factors of workability and segregation may be improved by plasticizing agents in amounts necessary for the aggregate being used. The amount of air-entraining agent required to produce a workable mix may run several times the amount of that required for a sand-gravel mix.

Drying shrinkage is an undesirable characteristic in some types of lightweight aggregate block especially in aggregates having high absorptive qualities and which require high cement content to produce the necessary compressive strengths.

A lightweight unit may be defined as one manufactured from concrete which when bone dry, shall not weigh less than 70 pounds per cubic foot nor more than 100 pounds per cubic foot. Standard weight units are considered to be manufactured from concrete weighing in excess of 100 pounds per cubic foot.

The serious shortage of cinders and slag aggregate in many localities has necessitated the processing of more easily obtainable raw materials, such as clay and shale into block making aggregates. These materials are to be found quite extensively in most regions.

#### MANUFACTURED AGGREGATES

Lightweight aggregates, manufactured from naturally occurring materials, may be divided into two groups. In the first group, reliance is placed on the fact that certain clays, shales or slates bloat or puff up when heated to the point of incipient fusion. In the second, lightness is obtained primarily by sintering a granular material in such a manner that a solid structure is formed in which the interstices are preserved as pores or voids; the original solid may bloat during firing, and add to the pore volume.

There are several methods by which this type of aggregate may be produced, chief of which are the rotary kiln and the horizontal traveling grate sintering system.

Lightweight aggregates under various trade names are being produced successfully from many types of raw materials; Haydite, Rocklite, Lelight, Aglite and Beslite are typical of aggregates produced by the fore-mentioned processes.

**HAYDITE AGGREGATE** — Haydite is an expanded aggregate made from a wide variety of clays and shales. The raw clay or shale, after preliminary treatment, is fed into a rotary kiln. The contents of the kiln are then rapidly heated to a temperature which causes a certain degree of fusion of the material. The cellular structure of the product is produced by the evolution of gases during the heating period.

After the clinker is discharged from the kiln, it is crushed, screened and graded into the standard commercial sizes used in concrete block manufacture.

Units of any texture can be obtained by proper blend-

ing of the aggregates. A 60 per cent coarse to 40 per cent fines ratio is common.

It is advisable to have at least 75 per cent of the total required mixing water present in the aggregate either in the stockpile or in the mixer before the cement is added.

Haydite concrete should be mixed until the mass is uniform in color and homogeneous. Longer mixing of the concrete renders it more workable. Units made from Haydite have a low-heat conductivity and are lighter in weight than cinder units. An 8-inch unit weighs between 25 and 28 pounds.

The use of units made from mixes of Haydite aggregate and high alumina content cement, such as Lumnite, Fondu, or equivalent make, has proved very effective for lining the test cells for Jet Engine testing, where sound deadening and resistance to high temperature (around 2,000 degrees Fahrenheit) qualities are required.

**ROCKLITE AGGREGATE** — This aggregate (Basalt Rock Makes Pelletized Aggregates—CONCRETE, April, 1953) is produced from a natural blue shale deposit found at Ventura and Napa, California.

Crushing and preliminary sizing are done before the material is expanded in the kiln. This assures well rounded, cellular particles having a smooth coated surface hard enough to scratch glass. The interior of the particles is a mass of tiny cells.

Because of this hard surface, and its consequently low absorptive quality, Rocklite aggregate, if desired, may be mixed dry with the portland cement and the water added later.

It is claimed, for concrete units made from Rocklite, that they are low in curing-shrinkage and volume change from thermal or moisture conditions. Standard size 8 x 8 x 16 inch units weigh around 25 pounds.

**LELITE AGGREGATE** — This lightweight aggregate is obtained by expanding or bloating metamorphic carbonaceous shale mined in conjunction with anthracite coal and processed in the vicinity of Lansford, Pennsylvania.

Bloating of the shale is done in especially designed traveling grate furnaces, heated to a temperature of approximately 2800 degrees Fahrenheit. The sinter emerges from the furnace as a cake or slab. The cake is reduced in size by crushing and screening to specific sized gradings for its various applications.

It is marketed in commercial sizes as coarse,  $\frac{3}{4}$  inch, weighing 40 pounds per cubic foot; intermediate,  $\frac{3}{8}$  inch, weighing 45 pounds per cubic foot; and fine weighing 60 pounds per cubic foot.

A combination of intermediate and fine size aggregate for block manufacture has a weight of approximately 56 pounds per cubic foot. Standard sized 8 x 8 x 16 inch units range in weight from 28 to 32 pounds. Units made from Lelite and Lumnite cement produce a concrete of high refractory quality capable of withstanding a temperature up to 2000 degrees Fahrenheit.

Aglite and Beslite Aggregates are produced from clay deposits at Marietta, Ohio and Detroit, Michigan respectively.

**BESLITE AGGREGATE** — Beslite is the trade name given to a type of lightweight, cellular aggregate made by sintering. Modular 8-inch units made from this material, graded to a fineness modulus of 3.70 to 4.00, have a weight of approximately 26 pounds.

In processing this, as well as all other lightweight aggregates having an affinity for water, care must be taken to see that at least 75 percent of the total amount of water

required in a batch of concrete is mixed with the aggregate before the cement is added to the mix.

Even when sand is substituted in the mix to the extent of 25 per cent by volume, the units will generally weigh less than 30 pounds. When sand is substituted, it is important to remember to compensate for the difference in weight of the sand as compared with Beslite. In a 50 cubic foot mixer the substitution of 25 per cent sand for Beslite would mean that 12.5 cubic feet of sand would replace 12.5 cubic feet of Beslite. Where the sand weighs approximately 100 pounds per cubic foot and the Beslite weighs 60 pounds per cubic foot, 1250 pounds of sand would be substituted for 750 pounds Beslite.

This emphasizes the need for carefully determining the proportions of materials where aggregates of different weights per cubic feet are used. The proportioning is basically in terms of volume but the volume must be transposed into weight per unit volume so that the correct amount of each material is used.

Taking into consideration the fact the more lightweight aggregate used, the more cement will be required to obtain the desired strength, it may be found that a 30 pound unit may cost from 1 to 2 cents less to produce than a 26 pound unit.

The cost of the unit is affected by the difference in cost between sand and prepared aggregate, plus the difference in the amount of cement necessary to produce a required strength.

Following are approximate weights of units obtained from the use of Beslite alone and also Beslite with varying proportions of mixes of coarse and fine sand.

Type of Mix	Weight of Unit
Beslite Only	26 lb.
Beslite and 12.5% Mixed Sand	28 lb.
Beslite and 25% Mixed Sand	30 lb.

## NATURAL AGGREGATES

**PUMICE AGGREGATE** — Pumice and other volcanic rocks are vesicular lavas in which the cells have been formed by the gases escaping from the molten materials. Some grades of this material, because of their wide variation in physical and chemical characteristics, are unsuited for concrete block manufacture. Deposits suitable for concrete are found in California, Utah, Oregon and New Mexico.

Pumice used as an aggregate in block manufacture presents definite problems, some closely related to those found in regular aggregates, others peculiar to pumice alone.

Block manufacturers have overcome many of these difficulties by perfecting their mixes, tightening down on specifications for lightweight aggregates, and conducting periodic tests on their finished products. Another characteristic of pumice aggregate is its tendency to segregate during shipment, in the stockpile, as well as in the block machine. This feature is induced, apparently due to its low specific gravity. Pumice also possesses variable absorptive properties.

Another feature of pumice block is their tendency towards excessive shrinkage. However, the use of properly cured and dried block in conjunction with some form of reinforcing, or the inclusion of adequate control joints will tend to minimize cracking of units in wall structures.

**PHYSICAL PROPERTIES** — Pumice has a fusion point

of approximately 2450 degrees Fahrenheit. It possesses high heat insulating values, fire resistant qualities and lightness of weight of the finished units. The weight of the conventional 8-inch unit ranges from 20 to 25 pounds.

**GRADING OF AGGREGATE** — Grading of the aggregate is an important factor. Varying textures of block may be produced from either straight use or blends of aggregate, based on American Society for Testing Materials, Specification C331-53T.

The following range for pumice is presented merely as a guide for a combined aggregate.

Sieve Sizes	Specification Range
% Retained	
3/8 in.	0 - 10
#4	15 - 25
#8	30 - 40
#14	45 - 55
#28	60 - 70
#48	75 - 85
#100	85 - 90
Fineness Modulus	3.10 - 3.75

In pumice as with sand-gravel aggregate the minus #48 and #100 sieve fractions seem to play an important role.

Grade "A" load bearing units of 1000 pounds per square inch may be obtained with a lower yield of units per sack of cement. Mix proportions for load bearing units range from 1.5 to 1.7 mixes.

The effect of too much fine material in the aggregate tends to gum up the cement. Premixing the pumice aggregate for too long a period can produce what may prove an undesirable increase in the amount of fine material, minus #100 to #200 mesh, due to the resulting excessive abrasion of the aggregate. Removal of the fine material from the #28 mesh sieve down, with substitution of sand to produce a fineness modulus of about 3.70, may be resorted to as a corrective measure without adding materially to the weight or impairment of the other qualities of the unit.

**PROCESSING AGGREGATE** — For best results, the aggregate should be batched on a volume basis though delivered to the mixer by weight.

The moisture content should be determined and compensated for so as to have a uniform volume in each batch.

Aggregate, if not sufficiently wet in the stock pile, should be brought to a proper state of saturation in the mixer. Ample time should be allowed for the saturation to take place before the cement is added to the mix. Bone dry pumice will absorb up to about one-third its weight of water.

The mix should be as wet as possible, short of causing slump of the units as they come from the machine. Excessive "bleeding" from the block indicates the presence of too much water, which should be reduced in quantity. The maximum possible vibration of the machine should be utilized in moulding the units.

**CURING UNITS** — The time required to steam cure pumice units is greater than that needed for sand-gravel units. This is accounted for by the fact that light-weight concrete, generally, has a higher equilibrium temperature; and consequently, a longer period of time is required to reach this point.

(CONTINUED NEXT MONTH)

# They Build a Chapel of Precast Concrete

Reinforced concrete, precast 12 miles distant and hauled to the site in sections, forms the exterior for an unusual religious center.

It is the new Chapel designed for use by the U. S. Air Force men assigned to Strategic Air Command's bomber base at Anderson Air Force Base on Guam.

It was designed by architect Thomas B. Bourne Associates Inc., Washington, D. C. The Chapel was constructed by a five-company team consisting of Brown & Root Inc., Houston; the Pacific Bridge Co., San Francisco; Maxon Construction Co. Inc., Dayton; Swinerton & Walberg Co. and the Utah Construction Co., both of San Francisco.

The central chancel and nave section of the Chapel, 54' x 103' at the base, consists of an inverted V with the peak towering 50 feet above the floor.

Two wings extend out from the rear of the building with one wing providing space for offices of Protestant chaplains, store rooms, kitchen, rest room and a classroom.

The right wing is an area for confession rooms, Sacristy, Eucharistic room and an office for the Catholic chaplains.

By using precast construction, with the panels being formed at the precasting plant, the concrete wall and roof panels were actually completed before construction started at

the job-site, 12 miles away.

The precast plant has the sole railroad on Guam, with 4½ miles of standard gauge track, 2 small engines and short flat cars which were used to move the pre-cast forms and the completed panels in and out of the plant.

The molds were lifted on a flat car and removed from their construction area for storage in the reinforcing shed. Here prefabricated screens of reinforcing rods were lowered into position and secured to the mold.

In the nearby pouring shed a crew sprayed the inner walls and bottom of the mold with gasoline and petroleum jelly to leave a thin coating of grease on the mold which then received the concrete poured from a large hopper mounted over the rail tracks.

In the processing shed a vacuum mat with 8 hoses was used to draw excess water from the concrete, after which the concrete was cured and the panel lifted from its mold.

Each slab was then ground to a smooth finish before being hauled to the job site on low trailers. At the site the seven-ton roof panels were lifted into place by a crane and bolted.

Because of the size and weight (35 tons) of the inverted V-shaped supporting columns, it was necessary that they be precast in two separate pieces.

Cincinnati was very hot (and the local baseball club took a drubbing at the hands of Brooklyn, 7-0) during the two-day annual meeting of the Ohio Ready Mixed Concrete Association, June 18 and 19.

Fortunately, though, the Sheraton-Gibson Hotel was air conditioned.

Outgoing President Roger H. Slugg, Hamilton Sand and Gravel, Hamilton, Ohio, said in his report, prior to turning over the gavel, that the Association had prospered during the past year. It now included 168 active members and 42 associate members, an increase of 28 and 7 respectively.

Mr. Slugg, later, brought up some problems involving ready mixed producers in Ohio. He recommended the Association take a stand against producers who were hauling other materials in their trucks. He said these producers were abusing a tax advantage their trucks had over com-

## Ohio Ready Mixed Assn...

petitive dump trucks. Mr. Slugg also suggested producers cut up and sell for junk their old mixers, rather than take a trade-in or discount on a new machine. Such a practice would keep worn-out units out of the hands of competitors and new producers.

R. W. Ochsenhirt, Botzum Brothers Company, Akron, took over the gavel from Mr. Slugg as the Association's president for the coming year. The new vice-president is E. E. Osborn, Clinton Construction Company, Wilmington. Ralph H. Anderson took on another year as treasurer of the Ohio group.

New directors, elected for three year terms each, were: R. Slugg, retiring president, W. W. Sloter, and M. S. Bartholomew.

Principal speaker at the luncheon, Wednesday noon, was Vincent P. Ahearn, executive secretary of the National Ready Mixed Concrete Association. Mr. Ahearn, of course, reviewed the national picture with relation to the ready mixed producer—total ready mixed business last year was over \$1 billion, over 75 million cubic yards were produced, and average price was \$13.16 per cubic

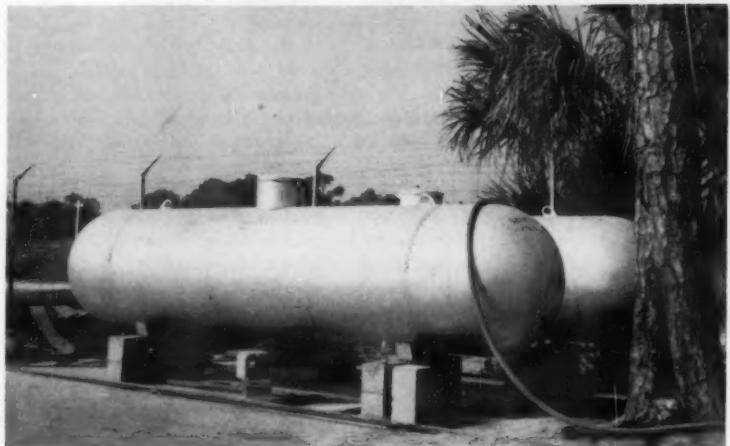
(Continued on page 55)



● The carburetor used with LP-Gas has only three parts, thus eliminating many adjustments necessary on a gasoline engine.



● A 65-gallon tank, which holds the LP-Gas under pressure, feeds both the mixer engine and the truck engine at the same time.



● Two 1,000-gallon tanks, located near the plant's entrance, yet safely away from the buildings, permit easy access by incoming and outgoing trucks.

## • Costs Less with LP-Gas

by HARRY J. MILLER

**C**ONVERTING all of our truck units and fork lift trucks from gasoline to LP-Gas (propane), has not only resulted in a substantial saving in fuel costs, but has been followed by a major lessening of maintenance bills, as well as some minor, but significant fringe benefits."

So speaks William J. Sullivan, owner of Modern Builders Supply of Sarasota, Florida, dealer in ready mixed, concrete block, and other kindred building items. Considering that this company presently operates a fleet of 20 trucks, all undergoing conversion, the resulting economy presents a pleasant profit-picture. Mr. Sullivan believes his fuel economy runs about 10 cents a gallon.

"We were paying 30.6 cents per gallon for ethyl gasoline even at fleet prices," said this ready mixed producer, "and averaging 11,000 gallons a month. Now our price is based at 15 plus 3 cents.

"Under the terms of our agreement with the supplier, the price of gas is stabilized for us for 60-day periods.

"As a rule, price fluctuations are more pronounced on the retail level than at the wholesale level on which we fill our two 1,000-gallon tanks six times a month, so we know exactly what the fuel will cost us for each next two months."

In the mixer engine, especially, the benefits of LP-Gas are striking. These engines do a lot of idling in a day's run. On gasoline, they choke up quickly with carbon. Propane banishes this cause of eternal maintenance.

Mr. Sullivan also hooked up the mixer engine and the truck engine on each rig to a single 65-gallon tank, thus



● Modern Builders Supply is rapidly converting all its mobile units to LP-Gas (propane).

achieving greater economy from the truck engine, too. However, this posed the problem of convincing tax authorities just how much of the fuel should be considered tax-free because of its use in the mixer engine.

Florida law permits a tax relief of 7 cents per gallon on all gas used in the mixer engines.

A Hobbs engine-hour meter was installed, which records the hours the mixer engine actually operates. By running a test on a unit for a solid week, its reading was accepted as a working average for the other units. But the recorded data is kept filed in case of future disputes.

On gasoline operation, Sullivan's trucks had their oil changed every 30 days. With LP-Gas, such changes occur only once every 4-months.

During the period of gasoline operation, it was an exceptional experience to be able to operate an engine for more than a year of hard running without a complete overhaul. Sullivan's head mechanic, Tom Watts, who was with Ewell Engineering, ready mixed dealer in Lakeland, Florida, and operator of 45 propane trucks, said, "Some of our trucks ran 6 years without an overhaul."

There are no filters on an LP-Gas engine to maintain or replace, and the extra quart of oil to fill those on gasoline engines isn't required with propane. Operations such as valve grinding and replacement of rings is done far more infrequently when engines run on this liquid, which

vaporizes when released from pressure, and about the same power is yielded up by the fuel as compared to gasoline.

While it is a bit early to make an estimate of mechanical savings by Modern Builders, there are many instances of other concerns with propane engines now in their third year of hard service without major repair.

"The same thing applies to spark plugs," said Don Porter, one of Sullivan's mechanics. "We've installed three sets of plugs in gasoline trucks against a single plug on the propane jobs."

While it is considered good practice to overhaul an engine prior to its conversion to propane, Sullivan's mechanics consider this expense needless, and performance records have bolstered their contention.

It only takes one mechanic about 12 hours to make a conversion, since parts like carburetors are simple. A small regulator replaces the fuel pump, and it only takes a quartet of fittings for the entire job. The fuel tank is a pressure-tight closed system, and hazards of spillage, overfill and evaporation are largely eliminated. However, like any other inflammable fuel, LP-Gas should be handled with care.

Since it is a dry gas, there is no liquid to wash down the cylinder-wall lubricant and dilute the oil in the crankcase; the fuel pump is eliminated because the gas is under



● Daily readings of the Hobbs gauge gave the mixer engine's LP-Gas usage for determining the amount of tax refund.



● Even the fork-lift trucks are equipped for LP-Gas use, thus adding to the economy picture.

its own pressure in the tank and fuel line.

Conversions may be made when units are available for the job, and the working schedule goes on uninterrupted. Because gas storage tanks should be located a safe distance from buildings or other points of possible ignition, Modern Builders installed two 1,000 gallon tanks in such a position near the wire fence that encloses the plant. These, as well as the individual tanks on the vehicles, carry an easily-read gauge that indicates the percentage of gas remaining.

Among the fringe economies, Mr. Sullivan points to the temptation for possible pilferage of gasoline since the wire fence surrounding the sprawling yard is no deterrent to prowlers.

"Converting to propane effectively plugs a number of such possible financial leaks," says Mr. Sullivan, "since the gas is of no use in an auto engine unless it is equipped with proper conversion and carburetion units."

One of the problems of conversion concerns the contract between the gas dealers and the concrete producers who change over to their fuel. In some areas, the concrete producer is required to make the conversions at his own expense; and since this may run around \$250 to \$300 a unit, the owner of a large fleet may balk at the resulting investment.

In the case of Modern Builders, the firm entered into a lease arrangement whereby Mr. Sullivan signed up to

deal with the gas supplier for 3 years. In return, the fuel supplier made every conversion at an average of \$30 a unit.

Other gas suppliers offer a rental-lease arrangement whereby they make the entire installation at no extra cost, subject only to a continuance of business with the concrete producer. Should the producer decide to buy his gas elsewhere, he must reimburse the dealer for the installation or let the equipment go back. Or the new supplier may assume the cost of the equipment and become its owner.

Opinion among local ready mixed dealers is that whenever the finances of the company can bear the initial cost of the conversions, it is better for the dealer to own his equipment and make no contract for gas delivery. That way he is free to shop around for lower gas cost.

In the Sullivan plant, the modest cost of \$30 was acceptable as the price of the conversions performed by his LP-Gas supplier's mechanics. Dealers do claim, though, that the average auto mechanic can learn to install and maintain LP-Gas equipment with a week's instruction.

Mr. Sullivan was quite emphatic and enthused over the fact that propane is protecting his profits. More LP-Gas service stations are seen on the highways; conversions may be performed during seasonal slackness, and the marvelous efficiency of propane fuel is far from a myth. The number of concrete dealers using it is rising steadily.

# BAUGHMAN BULK MATERIAL TRANSPORT BODY...

designed for

**Cement, Salt, Sand,  
or any free flowing  
material**



FOR  
ADDITIONAL  
INFORMATION

write for new  
illustrated bulk  
body catalog.

- NEW 9" NON-CLOGGING AUGER. Located at bottom of body. Unloads 1 to 2 tons per minute, depending on material.
- COMPARTMENTED BODY. Relieves weight of full load on conveyor. Compartment doors individually tripped as load empties.
- SCIENTIFICALLY SLOPED SIDES. Assure constant material feed to auger. For any dry, free-flowing, non-abrasive material.

Dealers wanted in Selected Areas

**BAUGHMAN MANUFACTURING COMPANY**

102 ARCH STREET • JERSEYVILLE, ILLINOIS



Whitest

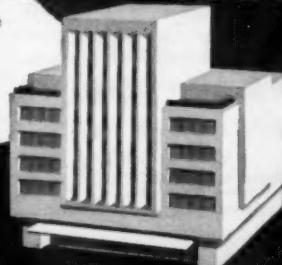
## THE WHITEST WHITE BY ANY STANDARD

Trinity White Portland Cement is whitest in the bag . . . whitest in the mix . . . whitest in the completed job. You can see the difference! This is a true portland cement—it works the same as any portland—looks much better. The extra whiteness of Trinity White has made it a favorite of architects. Ask your dealer for Trinity Brand White Cement when you are making architectural concrete units, stucco, terrazzo or any other concrete where whiteness or purity of color is important.

A product of GENERAL PORTLAND CEMENT CO.  
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Trinity White

P O R T L A N D C E M E N T



Whitest in the  
completed job

As white as snow



### Home-Builder's Operation

The home builder operates either as a speculator, building homes for sale, or as a custom house builder building homes for individual clients.

The speculative builder usually takes options on land, or purchases outright completed lots and builds his houses within a period which may range from six months to several years after purchase. The custom builder may build on the client's lot or on his own, and usually takes three months in which to construct the home.

### Home-Builder's Organization

A builder's organization is usually small and most of his work is done outside his office. Therefore a salesman of building materials often finds it difficult to locate the man who buys the materials.

But just because he's hard to find is no reason for a salesman to neglect making his regular sales calls. An evidence of this was brought up by one home builder. He mentioned that of the 20 manufacturers represented at the conference, salesmen from only 5 had called on him. He was currently doing business with 4 out of the 5 organizations.

### When to Approach Him

The period between purchase or option of land by the large speculator and pouring the first foundation varies. The lag is shorter for the small builder.

The critical time, though, is when the builder is working with his architect.

Many large speculative builders stated they liked to be approached just after the rough plans have been approved by the city planning commission.

Once the specifications have been established, the permit issued, and the model home under construction,

it is usually too late to sell a builder on any change, unless it is something startling.

In the case of the large builder who may come out with one or two model homes per year, he will be buying for his spring model early the preceding winter. He purchases for the fall model late the previous spring or early in the summer.

One builder said, "It is my concept of the manufacturer's job that he should keep in constant contact with the builder, who is always considering what he is going to do in the next house he constructs."

Another said, "We are constantly in the market buying raw materials. While the concept of a new project is going on, our manufacturing process of turning out homes is going on at the same time."

### How to Approach Him

A closer study of a builder's operations, likes and dislikes, would certainly lead to more effective communication between the builder and the salesmen who want to do business with him.

Salesmen should approach builders and give the impression that they are "on the ball," not only to the plans and needs of an individual builder who is a prospective customer, but to developments throughout the building industry.

Salesmen must be better informed about products, application techniques, and costs. This information must include knowledge of competitors' products, applications, and costs.

### Manufacturer's Advertising?

Advertisers, in effect, say: "Buy my product. It will help you sell your house." But will it? Builders have doubts concerning the answer to this question.

**DIRECT MAIL ADVERTISING:** The

attitude of builders appears to be that much of direct-mail advertising is not read and is therefore wasted.

Generally, direct-mail competes for the builder's interest against his first-class business mail; with such competition, direct-mail advertising tends to lose out.

Much direct-mail advertising is no more than a duplication of trade publication advertisements.

On the other hand, direct-mail which contains "technical information" tends to be read or preserved.

Manufacturers might, therefore, clearly identify their direct-mail envelopes when technical information is included, to avoid having the material consigned to the waste basket.

**TRADE PUBLICATION ADVERTISING:** Trade magazines are often taken home to be read, and so they are examined in an atmosphere conducive to thinking and planning.

Readership of advertisements is affected by the builder's interest in the product at the moment.

Builders want advertisements that give them accurate, informative copy.

**LOCAL TRADE PUBLICATIONS:** Builders read local builders association publications. These give the manufacturer the opportunity to use local personal touches in his copy.

**CATALOG ADVERTISING:** Some builders find catalogs of products and directories of manufacturers very helpful. Usually, though, they find it difficult to obtain copies.

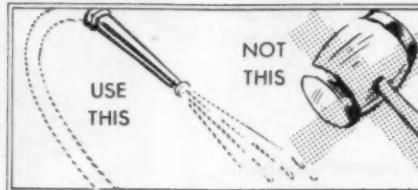
### Editor's Note

The home-building industry is one of the large users of, and a vital outlet for, the products of producers of ready mixed and concrete block. Knowing this, and knowing also that this area of construction is in a period of slowed-down activity, we feel that the information contained in the pamphlet "Trends in Builder's Buying Habits" is essential reading for everyone trying to reach this market. The booklet, produced under the direction of the National Association of Home Builders, was the outgrowth of a two-day conference, last January, that included 40 home builders and representatives of manufacturers. A few of the essential points brought out in this pamphlet are mentioned here. This is the first of two parts.

# PROTECT YOUR EQUIPMENT

*From Hardened Concrete*

**NOW!** Wash away your concrete cleaning problems with FORRER'S Kover-Kote



Kover-Kote is an effective film forming compound designed especially to ease cleaning of ready mix trucks and other concrete equipment. It can be easily sprayed or brushed on any type of painted or unpainted surface. It forms a tough flexible transparent coating that will protect your equipment from concrete adhesion. Hard concrete can be easily dislodged by hand, or by using a forced stream of cold water. Not affected by rain.

Send for TRIAL OFFER of one 5 gallon can at barrel price of \$1.75 per gallon.

FORRER'S, 2225 N. Humboldt Avenue, Milwaukee 12, Wis.

#### Check these advantages!

- ✓ Cuts clean-up time
- ✓ Easy to apply
- ✓ Easy to wash off
- ✓ Increases equipment life
- ✓ Cuts maintenance costs
- ✓ Unaffected by oil, gas, grease, or rain

#### FORRER'S STAR PRODUCTS FOR MASONRY

- ★ X-L 100. Powdered concrete plasticizer
- ★ Kleen-Mix. Eliminates "build-up" on hoppers and mixers
- ★ Hydro-check. The perfect fast-setting, waterproofing cement additive
- ★ De-Solv-It. Dissolves concrete — without harming metal
- ★ Accelerator. Speeds setting concrete — down to 15° F
- ★ For-Air. Concentrated air entraining agent
- ★ Moisture Probe. Measures sand moisture content
- ★ Moisture Meter. Regulates water in concrete mix automatically



put the *Erickson* "workhorse team"

to work in your plant!

ERICKSON FK-60  
FORK LIFT TRUCK



The ideal truck for the concrete industry. Ericksons have a proven 30-year record for low-cost handling cubed blocks in the yard — stockpiling, loading and unloading delivery trucks.

Here's the pair of Ericksons that have proven themselves the BACKBONE OF BLOCK PRODUCTION. Erickson's rugged dependability and long life have won its reputation as "the workhorse of lift trucks". Erickson trucks are custom-built to fit your needs.

OVER 1,000  
BLOCK PLANTS  
cut costs with  
*Erickson*

ERICKSON POWER LIFT TRUCKS, Inc.

221 St. Anthony Blvd. N. E. • Minneapolis 13, Minn.

ERICKSON AR-TIC-U-LATED  
PLATFORM TRUCK



A revolutionary new idea for speed and maneuverability handling heavy loads in close quarters. This new Erickson is AR-TIC-U-LATED—with a pivot between platform and drive wheels which gives the effect of 4-wheel steering. Platform beds up to 10 or 12 feet long.

## MANUFACTURERS' NOTES

### Alpha Portland Cement Co.



R. S. Gerstell

Changes in the administration of the Alpha Portland Cement Company, Eas-ton, Pennsylvania, have been announced by the board of directors.

R. S. Gerstell, former executive vice-president, has been elected president. He became vice-president in charge of sales in 1949 before his election as executive vice-president in 1955.

Mr. Gerstell succeeds J. F. Magee, who has been named chairman of the board of directors. E. F. Brown-stead is the newly appointed general manager of operations.

### Yale & Towne Mfg. Co.

James Rainey has been appointed district sales manager for the South central United States for The Yale & Towne Manufacturing Company, Philadelphia, Pennsylvania. From headquarters in the Yale regional sales office at Chicago, Mr. Rainey will supervise the sale of Yale industrial lift trucks and hoists in Mis-souri, Kentucky, Kansas, Oklahoma, Indiana, southern Illinois, Nebraska and Iowa.

### Marquette Cement Mfg. Co.



P. Duncan

his election to the post in 1951, and will continue to perform those duties. Mr. Duncan has been with the company since 1933.

Paul Duncan has been elected vice-president and director of Marquette Cement Manufacturing Company at Chicago. He has been assistant secretary-treasurer of the company since

### Knickerbocker Company

Truck-Man Division of the Knick-erbocker Company, Jackson, Michigan, announces the appointment of David W. Dewey as sales manager for the company. He will be solely responsible for the sales of the trucks for the entire United States and will work through the company's present dealer organization.

### Hyster Company



R. F. Moody

Three appointments involving key Hyster Company personnel at Portland, Oregon, and Dan-ville, Illinois, have been an-nounced.

Robert F. Moody, who has been eastern division sales manager of Hyster industrial trucks at Dan-ville, has been appointed domestic sales manager and will have charge of all industrial truck sales activities in the United States, Hawaii, Alaska and Canada.

Raymond L. Howerton, formerly assistant sales promotion manager,



R. L. Howerton



R. M. Ronald

becomes sales promotion manager of the Portland, Oregon, plant. In this position he will be responsible for promotion activities in both the in-dustrial truck and tractor equipment divisions.

Another appointment at the Port-land plant is that of Ray M. Ronald as domestic sales manager of Hyster's tractor equipment division. In his new position, Mr. Ronald will work with all phases of Hyster's tractor equipment sales in the United States, Alaska, Hawaii and Canada.

### Heltzel Steel Form

The Heltzel Steel Form & Iron Company of Warren, Ohio has announced the appointment of Ernest A. Gardner to the position of Director of Engineering for Heltzel and all affiliated companies. Mr. Gardner, who has been with the Heltzel organization since the latter part of 1956, moves from the position of sales manager for industrial sales to his new assignment.



E. A. Gardner

### Marietta Concrete Corp.

Robert D. Johnson, of the Marietta Concrete Corporation, Marietta, Ohio, has been appointed a vice-president of the company. He will be in charge of all engineered product sales. Mr. Johnson has served as assistant to the executive vice-president since February 1, 1957, and has been with the company since 1950.



R. D. Johnson

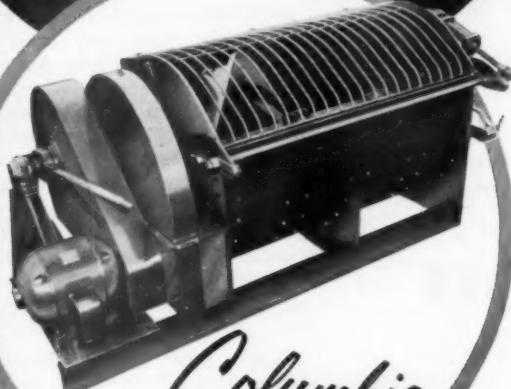
### Koehring Company

Two dealers have been named by Koehring Company, Milwaukee, Wisconsin, as distributors of equipment manufactured by the company and its divisions.

The Action Equipment Company of Stockton, California, has been appointed to handle sales and serv-ice of heavy construction equipment manufactured by Koehring, Parsons, and Kwik-Mix.

Pacific Builders Supply Company of Portland, Oregon, is a new con-struction distributor for materials handling units manufactured by Kwik-Mix Company. Sales territory includes all except Malheur County in Oregon, and five counties in Washington: Clark, Cowlitz, Klicki-tat, Skamania and Wahkiakum.

## CAN YOUR CONCRETE MIXING BE IMPROVED?



### *Columbia* **BATCH MIXERS**

... give you the right equipment for a faster, more efficient mix. The right quantity and quality of aggregate, cement, and plasticizer, in Columbia mixers will yield perfect batches time after time.

**Columbia Mixers are manufactured in sizes and capacities to meet industry demand. The following five models are available for immediate shipment:**

MODEL 12	MODEL 25	MODEL 40	MODEL 50	MODEL 75
(12½ cu. ft.)	(27 cu. ft.)	(45 cu. ft.)	(54 cu. ft.)	(81 cu. ft.)

HANDLES 10,000  
POUNDS OF MIX  
AT ONE CHARGE

### *Columbia* FEATURES

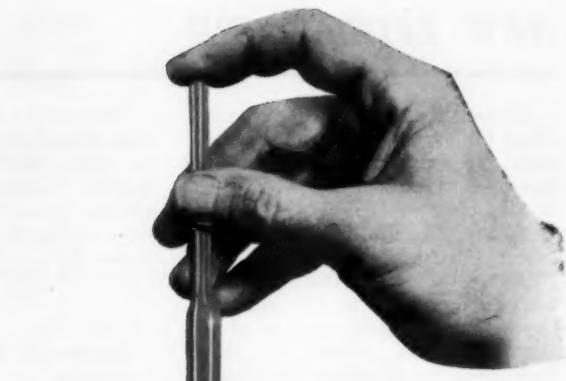
Heavy duty SKF dust-proof bearings. Toggle-operated self-discharging gates. Spiral blades made of long-wearing Nihard steel. Rugged all-welded construction. Low charging sides allows use of batchers and measuring devices. Heavy-duty electric motors insure efficient operation with full loads. Heavy cut gears give positive drive and long wear. Safety grids made of heavy bars. All models can be equipped with hydraulically-operated doors at slight extra cost.

There is a Columbia representative in your area  
... for immediate delivery on Columbia's low-cost, efficient Batch Mixers, write, wire or phone.

### *Columbia* MACHINE

Home Office: 107 S. Grand, VANCOUVER, WASHINGTON  
Factory Branch and Warehouse: MATTON, ILLINOIS  
Parts Depot and Office: BURBANK, CALIFORNIA

MANUFACTURERS AND WORLD WIDE DISTRIBUTORS OF A COMPLETE LINE  
OF PLANT EQUIPMENT FOR PRODUCTION OF CONCRETE PRODUCTS



A NEW NAME IN CONCRETE ADMIXTURES



MARACONS are water-reducing admixtures for concrete. They permit more complete hydration of cement particles and permit a substantial reduction in the unit water content without loss of plasticity or consistency of the mix. This means —

#### A. Lower Concrete Costs: —

1. Attain higher strengths without increasing cement content of a mix.
2. Maintain slump and workability at low W/C ratios.
3. Permit economical redesign of conventional concrete mixes.

#### B. Better Quality Concrete: —

1. Minimize shrinkage in concrete before and after hardening, due to lower water content and more complete hydration of cement.
2. Achieve greater water-tightness and increased durability with respect to freezing and thawing.

The MARACONS also reduce water requirements in concrete mixes containing pozzolanic materials.

Write for File No. CO-77. You'll receive additional information including results of exhaustive independent laboratory tests and actual field experience.

**MARATHON Corporation**  
CHEMICAL SALES DEPARTMENT  
ROTHSCHILD • WISCONSIN

## NEW LITERATURE

**HANDLING CONCRETE PRODUCTS—**Ideas for handling concrete products with industrial trucks and attachments is presented in a 26-page booklet just published by *Hyster Company*, 2902 Northeast Clackamas Street, Portland 8, Oregon. Entitled "Effective Ideas for Handling Concrete Products," it is available through the company or any of its dealer locations. Illustrations show techniques for handling block, pipe and precast products, and attachments used in handling aggregates, forms and concrete pouring.

**CONCRETE CONVEYOR—**The *Fairfield Engineering Company* of Marion, Ohio, has released a four-page booklet, Number 157, giving specifications, photos and operating features of the Faircrete Conveyor, designed for placing concrete.

**INDUSTRIAL BOILERS —**A new eight-page brochure (AD-162) describes the line of Cleaver-Brooks Model CB boilers. Designs featured include fuel flexibility, four-pass con-

struction, forced draft design, unified electric and steam preheater, vibrationless impeller, and hinged doors with built-in refractory. Cut-away views and schematics illustrate flow of air and fuel. The bulletin is available from *Cleaver-Brooks Company*, Milwaukee 12, Wisconsin.

**BULK MATERIAL STORAGE—**Information concerning Day equipment for storing and handling bulk materials is contained in Bulletin 574 prepared by *The Day Company*, 810 Third Avenue N.E., Minneapolis 13, Minnesota. Descriptions, specifications, and dimensions of Day vertical and horizontal tanks are included. The bulletin contains many photographs of typical bulk material tank installations.

## "BIG TIME" ADVANTAGES

IN THIS  
COMPACT AND  
RELATIVELY  
INEXPENSIVE  
**KENT**  
SUPER  
BLOCKMAKER



Here is an entirely new semi-automatic machine ideally suited for SMALL and MEDIUM block plants.

A SPECIAL air cylinder-powered press head makes possible a faster cycle and assures blocks of uniform height and equal density regardless of the material used.

PRICED BELOW any machine of comparable performance, the SUPER BLOCKMAKER consistently produces blocks at a rate of 5 per minute from any aggregate and has a peak output of 6 blocks per minute.

Equal delivery of aggregate to the mold box is effected by agitation and mold box vibration assures uniform block density.

A simple push of a button starts cycle during which various operations are automatically handled in sequence.

You'll be surprisingly pleased at the comparative low cost of this machine. Write TODAY for illustrated circular.

**The KENT MACHINE COMPANY**

DIVISION OF THE LAMSON & SESSIONS CO.

CUYAHOGA FALLS, OHIO

CONCRETE PRODUCTS MACHINERY SINCE 1925

**PRESTRESSED TANKS—**Bulletin T-15 of *The Preload Company, Incorporated*, 211 East 37th Street, New York 16, describes in 4 pages prestressed concrete tanks for processing plants, pulp and paper mills, cement plants, water storage and supply facilities, and water treatment.

**V-BELTS—**Simple precautions to prolong the life of V-belts and increase drive efficiency are contained in a new 12-page bulletin released by *Allis-Chalmers Manufacturing Company*, Milwaukee 1, Wisconsin. The bulletin describes various types of V-belts, tells how to select and match them, and lists steps for their correct installation. The most common causes of V-belt destruction and their proper remedies are also explained.

**SAWS AND BLADES—**A ten-page price booklet is now available from the *Clipper Manufacturing Company*, 2800 Warwick, Suite 133, Kansas City 8, Missouri. The booklet features all Clipper concrete and masonry saws, saw blades, and joint sealers.

**FORK LIFT—**Efficiency in handling packaged masonry building materials is the theme of a new bulletin introduced by *The Prime-Mover Company*, Box 340, Muscatine, Iowa. Illustrated with action photographs, it describes pickup and hauling operations of the Prime-Mover model L-10 brick lift.

# NEWS from the Manufacturer

METHODS  
MATERIALS  
EQUIPMENT  
TOOLS

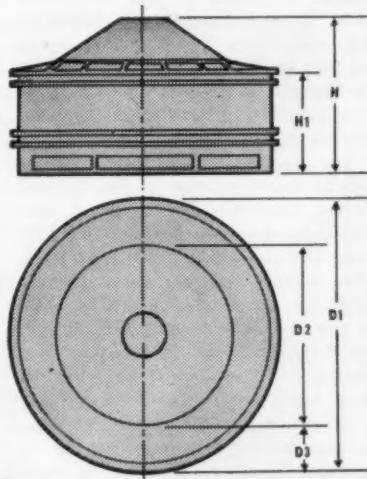
## Whipping Blades of Smith Turbine Type Mixer Braid Concrete Material at Nine Feet Per Second

The T. L. Smith Company of Milwaukee, Wisconsin and Lufkin, Texas, has just introduced a mixer incorporating revolutionary new design principles. It will have a tremendous impact in industrial and construction fields. The Smith Turbine Type Mixer will materially reduce costs, because it mixes faster (up to six times as fast as known makes), fits into spots too low for conventional mixers, and mixes so thoroughly that it actually homogenizes the materials.

In an effort to bring to the United States a mixer which would close the gap between the capacities of conventional mixers and the high production equipment they must serve and at the same time produce higher quality mixes, R. W. Smith, president of The T. L. Smith Company, took an extended trip to Europe to study the types of mixers being produced there. After careful consideration of six mixers, The T. L. Smith Company entered into a license

agreement with the Swedish inventor, Mr. Erik Fejmert, for the exclusive manufacturing and distribution rights to the Turbine Type Mixer in the Western Hemisphere.

Designwise, the Smith Turbine Type Mixer has a doughnut shaped mixing drum. The drive mechanism is located in the center of the drum. The drum itself is entirely different than the drum used with any other mixer. Actually, it is this drum shape which gives the "live mix". There is no dead center in the mixing area. The Smith Turbine Type Mixer allows for high peripheral speed in the entire mixing area. In addition, the blades are positioned so as to braid the material at the rate of 9 feet per second. This fast blade speed accomplishes another important result. The cement is activated by the whipping action due to the fact that these paddles move at this tremendous speed. The completely live mixing area, plus the blading and cement



Mixer Size	1/2 Yard Inches	1 Yard Inches	1 1/2 Yards Inches
H	48	56	59
H 1	30	38	40
D 1	66	88	105
D 2	40	61	81
D 3	13	13 1/2	12
Number of paddles	5	8	9
Net Weight (Approx.)	Lbs. 3100	Lbs. 5500	Lbs. 7750

activation, result in a much faster mix, a more thorough mix, and give, in the case of the concrete operations, a stronger concrete for any given designed batch. These principles apply equally to mixing in industrial fields.

The drive motor is located in the center of the mixer, and it transmits its power to the blades through a series of spur type reduction gears, which are enclosed and running in oil. Stresses and shocks are absorbed by the reduction gears, which work in connection with specially designed bearings taking both radial and axial stresses. The mixing blades are pivoted in horizontal bearings and are under spring pressure. They are adjustable for proper clearance against both the bottom and sides of the mixing tank. Designwise, the mixer is simplicity itself for ease of operation and low maintenance costs.



There are two other extremely important functions in the operation cycle of any mixer; namely: charging and discharging. The entire top of the mixing drum is open on the Smith Turbine Type mixer. As a result, direct charging is possible from any angle. Discharge is accomplished by merely opening a semicircular door in the bottom of the tank. The door is either hand operated or operated by means of an air ram. Discharge is extremely fast and complete. There is flexibility in discharging, also, since the discharge opening can be located in any section in the bottom of the mixing tank. It is even possible to have more than one discharge opening if desired.

The Smith Turbine Type Mixer will be manufactured in the  $\frac{1}{2}$  yard ( $17\frac{1}{2}$  cubic feet dry batch), 1 yard (35 cubic feet dry batch), and  $1\frac{1}{2}$  yard (53 cubic feet dry batch) sizes. The mixer weighs approximately 3100 lbs. in the  $\frac{1}{2}$  yard size, 5500 in the 1 yard size, and 7750 lbs. in the  $1\frac{1}{2}$  yard size. Basically, it is a stationary type mixer. However, it does have a portable feature since it is equipped with a lifting hook. It can be handled by a crane or transported on a monorail. In these two instances, the mixer becomes its own bucket and actually can be used to mix while transporting the batch to the pouring site. It is also feasible to adapt this mixer to a trailer type of mounting or to railroad car type of mounting.

Another feature is the fact that this mixer can fit into existing plants which have very limited headroom. For example, the  $\frac{1}{2}$  yard mixer charges approximately 30 inches above floor level, the 1 yard approximately 38 inches, and the  $1\frac{1}{2}$  yard approximately 40 inches. The overall height is approximately 48, 56, and 59 inches, respectively.

The mixer is virtually vibrationless, requiring no special installation. It has its own support and literally can operate without any hold-down devices. The mixer has actually operated while sitting on planks supported by two saw horses.

The mixer is extremely adaptable to the field of concrete.

Prestressed and precast concrete operations require a special type of concrete. This concrete must have extreme, high strength. The Smith Turbine Type Mixer mixes stronger concrete, and as a result operators can actually use less cement and still get the required strength. In addition, the portable feature allows the unit to be used for placing concrete directly in the forms.

For premixing, the low headroom required by the Smith Turbine Type Mixer becomes very important. There are many ready mix concrete producers who desire to have central mix, but who do not want to go to the expense and trouble of raising their entire plant to accommodate a central mixer. The Smith Turbine Type fits in most existing plants with little or no change in plant design. The fast mixing cycle is very important in this high production industry.

In both concrete block and concrete pipe plants, the mixing cycle has customarily taken from six to eight minutes per batch. With the Smith Turbine Type Mixer this mixing time approximates forty-five seconds. As a result, one mixer can be used to supply several block making machines. In addition, aggregates (whether light or heavy weight), water and cement can be charged simultaneously.

To substantiate the fact that the Smith Turbine Type Mixer will do a better job, there have been many tests run both in Europe and the United States. These tests are significant. In the field of concrete, government testing laboratories have tested the Turbine Type Mixer in competition with the best known European type mixers. These tests conclusively show that the Turbine Type mixes higher strength concrete faster and that it could give the operators a saving of 11% cement. Documented tests are available at The T. L. Smith Company office.

Here are the figures obtained from typical tests run in the United States. A leading concrete engineer designed two basic mixes, the former a  $5\frac{1}{2}$  sack mix and the latter a  $7\frac{1}{2}$  sack mix. The  $5\frac{1}{2}$  sack mix was designed to be 3000 to 3500 lb. 28-day strength concrete; the  $7\frac{1}{2}$  sack was designed to be 5000 lb. 28-day strength concrete. Both tests were run at the mixer's rated capacity of  $12\frac{1}{2}$  cubic feet of mixed concrete.

The Smith Turbine Type Mixer produced concrete which was 185% of the original designed strength in thirty seconds mixing time. Additional mixing produced no measurable variation in slump, washout tests or increase in compressive strength.

The Smith Turbine Type Mixer was installed in a block plant and tested in the manufacture of lightweight block. Normal procedure is to introduce the lightweight aggregate first, then the water, and then mix so as to wet down this aggregate. Only then can the cement be added. However, with the Smith Turbine Type Mixer everything was charged at once — water, aggregate and cement. The resulting mix was uniform and of the proper consistency. This mix gave a 950 lb. compressive strength at 7 days, which represents about 80% of the 28-day compressive strength. Specifications called for 1000 lbs. compressive strength in 28 days. The Turbine Type Mixer virtually reached the required strength within a period of 7 days. Mixing time in the Smith Turbine Type Mixer was one minute as opposed to the five or six minutes normally required in the standard block mixer. Not only did the Turbine Type Mixer give the required strength and eliminate special charging procedures, but it mixed in approximately one-fifth to one-sixth of the time. In the concrete pipe field, the Smith Turbine Type Mixer, already in operation, is giving equally satisfactory results.

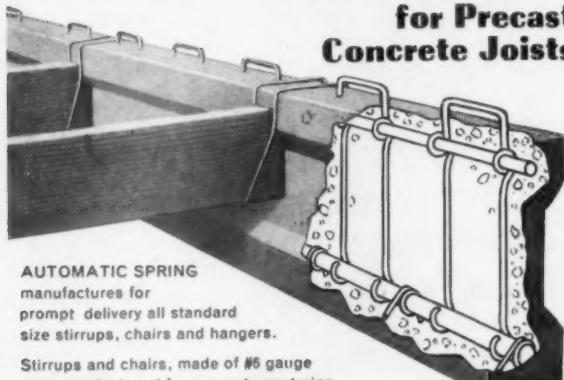
A Smith Turbine Type Mixer is available for test purposes in any industry. The engineering staff of The T. L. Smith Company invites operators to contact them relative to their specific problems. District field sales and service representatives are available for consultation at the operators' plants. Literature can be obtained by writing The T. L. Smith Company, 2881 North 32nd Street, Milwaukee 1, Wisconsin.

#### MIX TESTS ON TURBINE TYPE MIXER

Description	Mixing Time	Average Slump	Wash Out % Gravel	Aver. 28-Day Cylinder Strength
Gravel      39%				
Sand      43.5%				
Cement      12.3%				
Water      5.2%    30 seconds		$\frac{1}{4}$ "	37.5%	5560 lbs./cu. in.
Gravel      44.5%				
Sand      33.2%				
Cement      16.4%				
Water      5.9%    30 seconds		$\frac{1}{2}$ "	41.8%	6975 lbs./cu. in.

## STIRRUPS, CHAIRS and WIRE FORM HANGERS

for Precast  
Concrete Joists

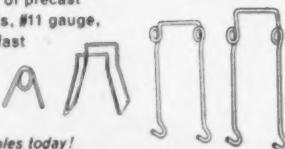


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and ease of use in the reinforcing of precast  
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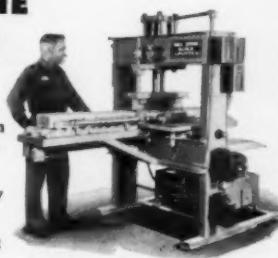
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complete  
details

# 3 profit makers

...in the complete  
**BESSER** line of  
**BLOCK SPLITTERS**

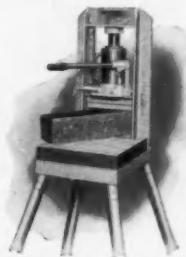
• Today — the trend toward split block is strong. Architects, builders and owners want this beautiful, modern "quarried stone" effect that is so ideal for all types of structures. Why not cash in on this tremendous market. Get the tools required . . . splitters and trimmers. The Besser Company, makers of the famous VIBRAPAC block machine, carries a complete line. Write today for literature.

### 1 BES-STONE SPLITTER



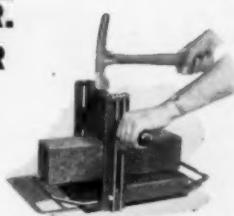
Splits block in a straight line, with speed, precision and safety. No cull block. Easily adjustable for splitting various heights. Holds block automatically in correct position. Finished split block is removed from under splitting knife by incoming block.

### 2 PONY BLOCK TRIMMER



Indispensable tool for on the job. Trims off the end of any block up to 8" by hand operated, hydraulic pump. Capacity 12 tons. Legs easily removable. Compact, lightweight, easily portable.

### 3 PONY JR. TRIMMER



Handy for trimming ends of block, brick or stone. Merely strike blade holder with heavy hammer. Cuts square or at any angle. Easily lifted by mason to scaffold.

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Complete Equipment for Concrete Block Plants  
ALPENA, MICHIGAN, U.S.A.

# COMMENT

from the  
**BUTLER ENGINEER**

## Is "Capitalist" a Dirty Name?

Sure there are faults and inequities in our capitalistic system—but the point is, as a people we can do something about it.

One thing that should have been done, and long ago, is to teach our respected government the difference between "depreciation" and "obsolescence". As a manufacturer of ready mix concrete or a concrete highway, your interest is as vital as ours; we as a manufacturer of the equipment you use.

Allowable reserves for depreciation are, in many cases, completely unrealistic. Your Roadbuilders Plant or Ready Mix Plant will last for 10 to 14 years—or so says the Government. Would you try to compete using the exact plant you bought when your beautiful teen-age daughter was a pink pearl in her bassinet?

Not to inject the horrible word "advertising" in this discussion—but as a case in point: two years ago we brought out the Butler 0-1-0 Roadbuilders Plant. It made everything before it absolutely obsolete. And this year we've brought out the TX4 which completely obsoletes the 0-1-0... Yet Government says "your 0-1-0 cannot be written off until 1972".

And it's the same thing with the equipment we install in our factory to make the equipment you use. But Government would lose taxes! Nuts! If equipment could be written off in one year Washington wouldn't lose a penny, because the year following, we'd have no depreciation write-off. Meantime you and we would be able to buy the best, newest and most cost-cutting replacement. Construction publication editors—please note. This subject deserves support.

Regards,

*The Butler Engineer*

BUTLER BIN COMPANY  
991 Blackstone Ave.  
WAUKESHA, WISCONSIN

## AA Wire Products Offers New System of Packaging

Masonry wall reinforcement, already packaged for easy warehousing, is being offered by the AA Wire Products Company, 7111 South Cottage Grove, Chicago 19, Illinois.

The reinforcement is packed in bundles of 25 pieces, 300 feet to a bundle. End-wrappers of heavy cardboard keep the ends from fanning out.

According to the manufacturer, warehousing is simplified because the type and size of each bundle is plainly printed on the end-wrapper; the packaged material can be handled by lift truck; and the bundled ends can't catch during loading and stacking operations.

## Soiltest Designs Mobile Laboratory Testing Unit

A Mobile Testing Laboratory recently was completed by Soiltest, Incorporated, 4711 West North Avenue, Chicago 39, Illinois.

The laboratory on wheels, designed and built for the Bureau of Public Roads, is equipped for standard soil and concrete tests. Mounted on a

Four Wheel Drive Auto Company truck, it has a van with inside dimensions of 16 x 7 feet where four engineers and technicians can work.

The unit carries its own utility equipment. Power is supplied by an electric generating set which lights the laboratory and operates the equipment.

Test equipment includes a portable 200,000-pound capacity concrete test-



ing machine for cylinder tests. There are attachments for cube tests and for beam flexure tests. While the laboratory is in transit all test apparatus is stowed in special cushioned compartments, drawers, and cabinets.

## Attachments for Tractors Allow for Job Variations

Work Bull Model 404 and the Pit Bull are two of the five wheel tractors manufactured by Massey-Harris-Ferguson, Incorporated, Racine, Wisconsin. The line is designed with 20 power-matched, interchangeable attachments, making each unit workable as primary equipment, back-up machines, and utility or clean-up tools.

The 500 Loader, shown mounted



on the Work Bull Model 404, has  $\frac{3}{4}$ -yard truck capacity with a 3500-pound breakout capacity. Lift and dumping heights are 10 feet six inches, and eight feet six inches, respectively. The forklift attachment shown on the Pit Bull unit is attached to the arms of the 500 Loader. Other attachments include a utility boom, which pivots 180 degrees, and a mast extension for Forklift Model 202.

Each of the five wheel tractors is powered by either gasoline or diesel engines to develop 34 to 52 horsepower.



Columbia Machine's parts and service department is geared to help you get maximum production from your block plant.

Your orders for parts and service receive priority at Columbia Machine . . . in many cases parts are in your plant in 24 hours; in all cases parts are shipped out the same day as your order is received.

Your plant equipment will function better with genuine Columbia parts. Designed and manufactured of the finest materials, Columbia parts fit perfectly and give long service under heavy plant operating conditions.

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Rigid, custom-de-signed Dur-O-wal prevents cracks.

It's a friendly hand that extends Dur-O-wal . . . the patented steel reinforcing for masonry walls. Dur-O-wal widens the horizon of masonry design; assures lasting, flawless beauty in masonry walls. Available everywhere.



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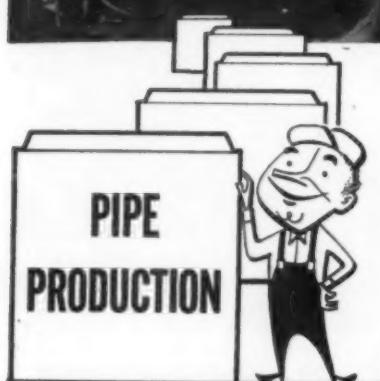


## C. S. Johnson Announces Portable Batch Plant

A new product at the C. S. Johnson Company, Champaign, Illinois, a Koehring Company subsidiary, is the Porto-Batcher, a portable batch plant that disassembles into three roadable trailer units. According to the manufacturer, production for the new batcher varies from 60 to 100 batches per hour, depending on batch quantities and truck size. An interlocked batch control with repeater is fully

automatic in operation.

Aggregate capacity of the unit is 39 cubic yards in four compartments; 46 cubic yards is possible with 12-inch staked side boards. A built-in water tank holds 650 gallons, with a provision made for direct connection to pressure water. Cement storage will hold 280 barrels. Two styles of discharge conveyors for the Porto-Batcher are available: one with an 8-foot 10-inch above-ground line clearance for batch trucks; a second with an 11-foot 6-inch clearance for transit-mix trucks.



When you put Cleveland form vibrators on the job.

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COMPANY

2708 Clinton Avenue • Cleveland 13, O.

## Portable Vibrator is Announced by Homelite

A new compact, lightweight, AC-DC electric concrete vibrator has just been announced by Homelite, Port Chester, New York. It weighs 33 pounds, complete with motor, five or ten-foot shaft, and two vibrating heads, 1-1/8 and 1-5/8-inches in diameter.

The vibrator works around reinforcing bars, spreaders, in small forms and in reinforced concrete

forms too small for large vibrators. A powerful 115 volt, 8 ampere motor runs the vibrator at 9,000-7,500 revolutions per minute at full load. The 1-5/8-inch diameter head is equipped with an adjustable dual variable eccentric for more exact vibration characteristics.

Motor "on-off" switch is mounted on high-strength aluminum motor housing. Extension shafts can be added. The vibrator can be operated a generator.



## Differential on Prime-Mover M30 Aids Traction

The Prime-Mover Company, Muscatine, Iowa, announces the addition of a Powr-Lok, no-spin differential to its Model M30 power truck. With the resultant better traction, the new differential delivers the major portion of engine power to the driving wheel.

If one drive wheel goes off a runway onto soft fill, driving force is directed to the other wheel which has sure traction. Tire wear is also improved by positive traction under all operating conditions.

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## Wettable Lampblack

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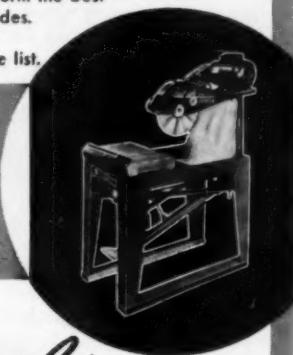
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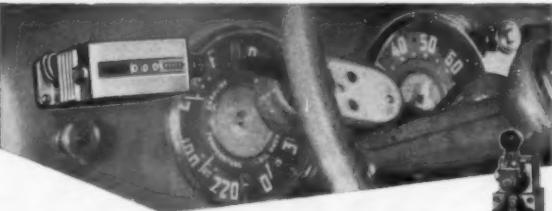


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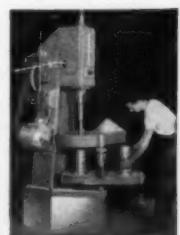
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Millions of dollars' worth of concrete drain tile are bought annually for farm drainage, reclamation work, highways, and other purposes. More local plants are needed so that supply can catch up with demand.

A manufacturer in Ohio made 167,000 concrete drain tile during the first year of operation — 924,000 in the sixth year. A plant in Wisconsin produces 3,000,000 a year. Champion machines make super-quality drain tile — dense, strong and truly round; 3" to 12" diameter. One-man operation with automatic feeder. Write at once for Champion book.



**W. E. DUNN MFG. CO.**  
526 W. 24th St., Holland, Michigan  
976 Dundas Highway, Cooksville, Ontario

For example: Average selling price of 4-inch tile is \$80.00. Average cost of materials is \$21.50.

# Dodson's Digest



## The art of persuasion

Jack Morrison and I got into a friendly argument the other day. I was visiting Jack's concrete-block plant, and he was showing me around the place.

"You've really got a good deal here, Jack," I commented. "With all the construction that's going on today, you can sell all the concrete block you can make."

"You're the one that's got the good deal, Dod," Jack replied. "Selling Calcium Chloride is easy. All you have to do is point out that Calcium Chloride gives concrete higher early strength, and it sells itself."

"No, you've got the easiest job," I insisted. "Concrete block is becoming more and more popular as a building material. Your market is increasing every day."

"That's true," Jack admitted. "But when you show a blockmaker how Calcium Chloride can cut his curing time in half, free his pallets sooner, and step up production . . ."

"You're right," I agreed. "But don't forget, Calcium Chloride helps *you*, too. It increases the workability of your concrete, so you can handle it easier. Think of the time and money that saves you! And besides, Calcium Chloride helps produce stronger, better looking block that's easy to sell."

"Another advantage you've got," Jack went on, "is that you can sell Calcium Chloride all year long. It increases the strength of concrete in both summer and winter."

Just then Jack's phone rang. It was an order for some block. He wrote down the details and hung up the receiver. "Look at that!" I exclaimed. "How could you have it any easier?"

"O.K.," Jack laughed, picking up his golf clubs. "I guess we've done a good enough job of talking ourselves into taking the afternoon off. Let's go!"

—L. D. DODSON

**P.S.** — Get the complete story on the use of Wyandotte Calcium Chloride for concrete products. Write me for your free copy of our folder, "How To Make Better Concrete Products and Ready-Mix." *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

**Wyandotte**  
CHEMICALS



MICHIGAN ALKALI DIVISION  
HEADQUARTERS FOR CALCIUM CHLORIDE

## Pettibone Mulliken Makes "Speedlift" Fork Trucks

"Speedlift" is the trade name of a new line of gasoline or LP-gas operated fork trucks announced by the Pettibone Mulliken Company, 141



West Jackson, Chicago, Illinois.

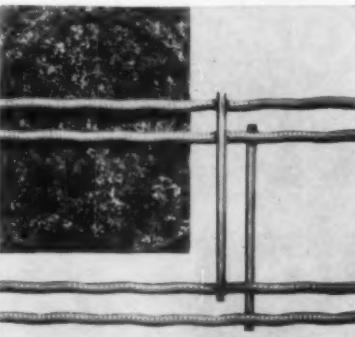
The all-hydraulic design eliminates clutch, transmission, differential, drive shaft and differential axle. The engine turns a hydraulic pump which actuates a hydraulic motor. Hydraulic couplings are the re-usable type, making it possible to replace a hose connection in the field.

Operation of the Speedlift follows the principles of the standard automobile. All controls and instruments are forward of the operator, within view and reach.

Weight of the standard model is 4380 pounds, making it suitable for operation in areas where floor capacities are limited. It will spin and turn in its own length because rear wheel turns a full 90 degrees in either direction.

## Wal-Lok Reinforcing Now Made of Galvanized Wire

Adrian Peerless, Incorporated, announces that Wal-Lok horizontal mortar joint reinforcing is being fabricated from galvanized wire. The material used is 100,000 pounds-per-square-inch, cold-drawn steel which



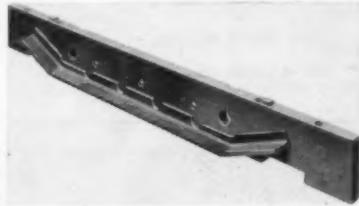
has been "electrolytically galvanized".

According to the manufacturer, the electrolytic galvanizing process provides a more complete bond between the zinc coating and the steel. The zinc penetrates the pores of the steel so that the two metals are intermingled. As a result, enough zinc remains on the steel after cold peening deforming processes and welding to prevent rusting for long periods.

Further information is available from Adrian Peerless, Incorporated, 1433 East Michigan Street, Adrian, Michigan.

## Angle Design Strengthens New Besser Mold Side Bar

A newly designed reinforced Mold Side Bar, manufactured by Besser Company, incorporates an extended heavy duty angle which is formed and welded to the bar. The particular design of this angle adds to the



over-all strength of the bar; a stress relieving process is employed which increases the tensile strength of the entire assembly.

The Mold Side Bar has been field tested on Vibrapac machines and is available for all standard molds. More information may be obtained from Besser Company, Service Department 314, Alpena, Michigan.

## Rawlplug Offers New Heavy-Duty Bolt Anchor

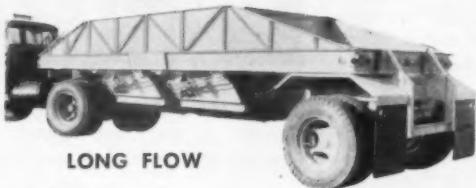
The Rawlplug Company of New Rochelle, New York, is now manufacturing the Rawl Multi-Calk for anchoring heavy equipment to concrete with bolts. The caulking sleeve is precision cast of Rawloy, a special lead alloy developed for masonry anchors by the Rawlplug Company.

According to the manufacturer, the Multi-Calk is designed for heavy-duty anchoring where economy is an important factor.

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LONG FLOW

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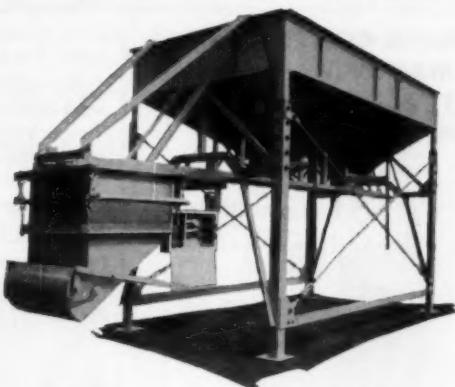
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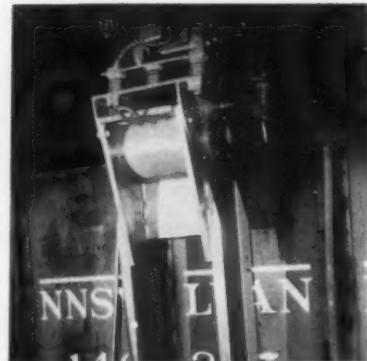
4711 W. NORTH AVE., CHICAGO 39, ILLINOIS

Eastern Office  
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## Synthetic Rubber Joint Sealer Prevents Leakage

Maximum protection against water leakage at control joints in concrete block wall construction is offered by "Titewall"—a new rubber control joint sealer manufactured by Servicised Products Corporation.

According to the manufacturer, double butterfly design of the synthetic rubber joint sealer permits easy installation. The wings on one side are pinched together and pushed into the groove where they open up



tion of the rotating shaft is carried directly to the car without going through any welded connections.

## Gerson Measurer Serves As Sales Promotion Tool

A new blueprint and map measurer for advertising, gift and goodwill use has been announced by the Gerson Company of Mattapan, Massachusetts. This device features  $\frac{1}{4}$  and  $\frac{1}{8}$ -inch architects' scales on one side, and on the other side, engineers' scale in tenths of inches and the regular inch scale in fractions. Since most blueprints are scaled to



to make contact with the groove walls. Once installed, "Titewall" remains in place without clips or mastic.

"Titewall" is available in strips of 8 inches, 24 inches, and 48 inches, or in lengths of 10 feet. It was designed for use with other Servicised products. More information is obtainable from the company at 6051 West 65th Street, Chicago, Illinois.

## Eastern Car Shaker Works On Stubborn Hopper Flow

A new car shaker, designed to expedite the unloading of materials from hopper bottom, open top, railroad cars, was announced by Eastern Constructors, Incorporated.

The action of the Eastern Car Shaker is produced by rotating an unbalanced shaft at 1,800 revolutions per minute. The shaft is fitted in two heavy duty, self-aligning bearings, carried in bearing housings which fit snugly in two heavy side plates. Side plates rest on the upper edge of the car when the shaker is in its operating position. The eccentric ac-



$\frac{1}{4}$  or  $\frac{1}{8}$  inch, length traced can now be read directly in feet.

The Measurer is supplied in a genuine leather case with flap and belt chain. The case can be gold-stamped with an advertising message. Further information is available from the Gerson Company, 91 Deering Road, Mattapan, Massachusetts.

## CLASSIFIED ADS

\$10.00 per column inch. Closing date for classified advertising copy is 15th of preceding month.

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Used Joltcrete No. 9 block machine, with off-bearing hoist, molds for 4", 8" and 12" block, about 3,000 pallets and 15 racks. Price \$1,750.00, less than the value of parts alone.

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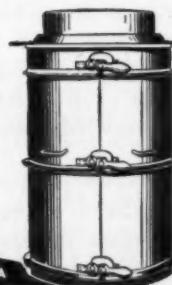
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## THE EDITOR'S PAGE

DOUGLAS LEE

### Research is Everybody's Business

TO AN extent, the long-haul future of an industry, and the manufacturers within it, can be measured by the quantity and quality of its research.

Of course, for a while, an industry can go along depending upon a continuing market for its present line. But even the best of today's products can become obsolete, or at least reduced from a position of importance, through invention or because of the likes and dislikes of the buying public.

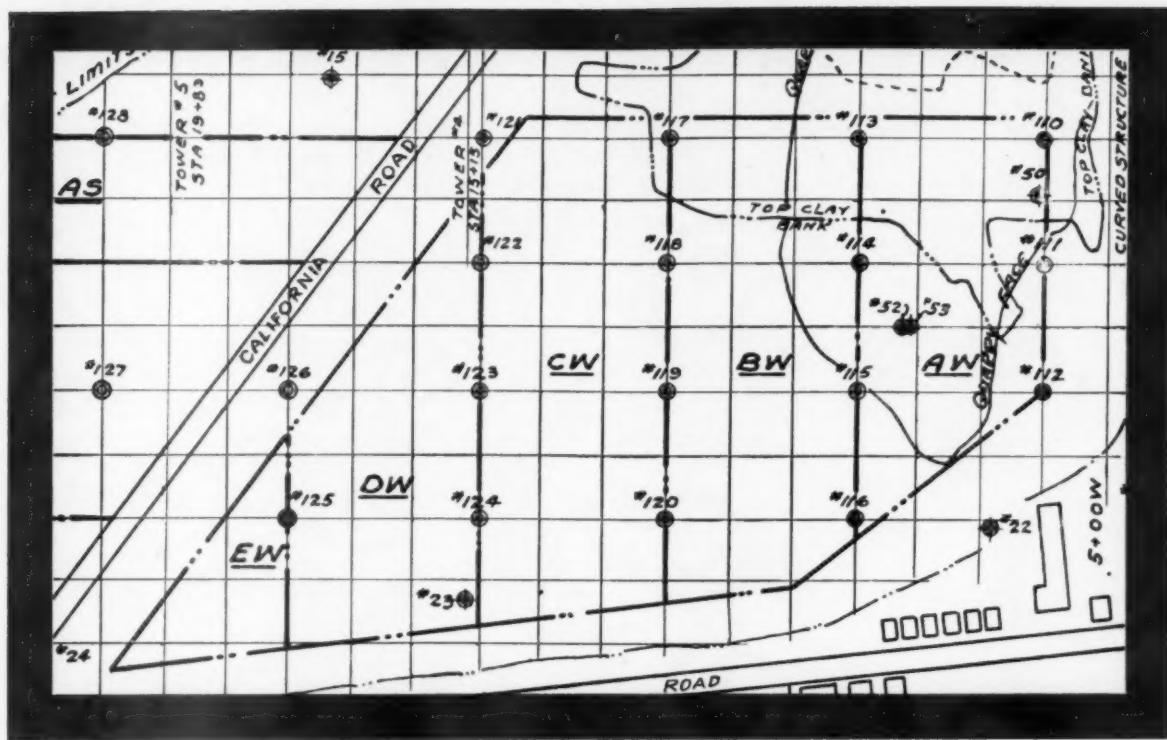
Just a century ago, the primary building materials were wood, clay products, and natural stone; then along came concrete. Now metal skins, forms of glass and plastics, are making increasing inroads into the construction and home-building markets. These are products of research—and a considerable expenditure on research at that.

If an industry is to stay alive, healthy, and growing in a market, someone must pay for the research necessary to keep its products in a competitive position. Large, well-financed manufacturers, such as those in the metals, glass, wood, and plastics industries, have the facilities, monies, and personnel to cope with exploration projects. Such is not the case, in most instances, in either the ready mixed or concrete products industries. Here, the majority of research is carried on by associations and paid for by scaled contributions of the members.

An individual producer may, of course, refuse to join his association and benefit from its research program. But, as we see it, he is doing both himself and his association a disservice in a number of ways. On the association level, his refusal to participate and invest will, certainly, diminish the association's funds for all its projects including research. Further, the individual producer's knowledge and experience are lost to the industry.

The producer, in turn, does not gain permissive use of improved or new products emanating from the association's research investigations. His alternatives are that he can continue to produce his original product (which, over a time, will attract a decreasing share of the market), or he may try to adapt to his own use the new products developed from research sponsored by others. This second approach, which smacks of craftiness, will for certain gain the enmity of the other producers in the field who were willing to bear their part of the load. Also, the producer who must make adaptations after a product is out has a continual fight just to maintain his status-quo.

From our thinking, the producer who contributes to the support of industry-wide research is far ahead of the producer who, through disinterest or false economy, refuses to participate in such a program.



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First step in eighty carefully controlled operations to produce Penn-Dixie cement is the development of a Core Map of its quarry properties. This Map charts the location and results of hundreds of exploratory drillings. Thousands of rock core samples are extracted from those drillings and subjected to laboratory analyses.

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The Besser Materials and Methods Department is just one of the many services rendered to Vibrapac Block Makers . . . services that enable them to produce BETTER block, FASTER at LOWER COST. For further information, write Dept. M-M, Besser Company, Alpena, Michigan, U. S. A.



Larry Miller, Ohio Concrete Products Co., Dresden, Ohio (left) and a field engineer (right) from Besser Materials and Methods Department, discussing test made in this company's laboratory.



Shown here are Besser men splitting large sample of aggregate from Athens, Greece, prior to conducting complete aggregate tests for the customer.



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Complete Equipment for  
Concrete Block Plants